

The younger sibling of PTSD: similarities and differences between complicated grief and posttraumatic stress disorder

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Just as traumatic experiences may lead to posttraumatic stress disorder (PTSD) in some individuals, grief may also be a serious health concern for individuals who have experienced bereavement. At present, neither the DSM-IV nor the ICD-10 recognizes any form of grief as a mental disorder. The aim of this review is to summarize recent advances in definition, assessment, prevention, and treatment of complicated grief disorder (CGD) and to compare CGD with PTSD. Four areas are identified to be of importance to clinicians and researchers: (a) the recently proposed consensus criteria of CGD for DSM-V and ICD-11, (b) available assessment instruments, (c) recent prevention and treatment techniques and related effectiveness studies, and (d) emerging disorder models and research on risks and protective factors. This review focuses on the similarities and differences between CGD and PTSD and highlights how a PTSD-related understanding aids the investigation and clinical management of CGD.

Keywords: *Bereavement; complicated grief; posttraumatic stress disorder; stress response disorder*

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The need for a description of a clinical phenomenon

When a new specialized clinic for posttraumatic stress disorder (PTSD) is established in Europe, we assume that not only PTSD patients will seek treatment there but also people who have lost a loved one and who experience their bereavement as a personal trauma. It is estimated that the latter category of patients constitutes approximately one-third of all those seeking treatment for psychotrauma or PTSD, either on their own or on the basis of a referral (Knaevelsrud & Maercker, 2008).

Take the example of a 42-year-old woman whose 19-year-old son committed suicide over a year ago. One day her son left home and laid down on the railway tracks to be hit by a train. There had been no warning whatsoever. The mother knew her son to be an introvert, but did not suspect him of being suicidal. She was thus immensely shocked by his death, and although she had

not witnessed it herself, she kept imagining the scene very vividly after the tragedy. This was so painful that she decided to take part in our outpatient trauma therapy program.

This patient did not fulfill the criteria for “classic” PTSD (in particular criterion A), but based on a clinical assessment, we decided to provide her with a therapy very similar to that used for PTSD. In this article, we will discuss theoretical and conceptual issues of complicated grief disorder (CGD), as well as issues pertaining to assessment and treatment of patients suffering from this disorder.

Some history

Grief and mourning as a distinct human condition deserving scientific attention was first described in Freud’s short paper “mourning and melancholia” (Freud, 1917). In this work, Freud compared grief to depression and found many similarities but also crucial

distinctions. Loss, according to Freud, leads to a state of depression-like behavior and feelings with one exception: one's sense of self is not endangered. It is interesting to note that he did not regard grief as a possible source of a psychopathological development.

In 1944, Eric Lindemann published a landmark paper on the symptomatology of acute grief. He described the many bereft following the “Cocoanut Grove Fire” which killed 492 people and injured hundreds more. Lindemann observed many behaviors that reminded him of severe mental states such as those observed with schizophrenia. He coined the term “morbid grief” to refer to a variety of behaviors, e.g., taking on symptoms typical for persons who die during a fire such as coughing and medical illnesses. He further observed anger and hatred towards particular persons or strangers, wooden and stifled movements resembling those of schizophrenia, self-harm such as exaggerated altruism, or agitated depression such as sleeplessness, extreme guilt, and even suicidal behavior. He also noted that many of the survivors did not show any signs of grief until much later, and he called this reaction “delayed grief” (Lindemann, 1944). It is unclear whether these individuals suffered from posttraumatic reactions or grief from the sudden loss of loved ones. It is, however, the first scientific paper describing an “abnormal” grief reaction.

The work of John Bowlby (1980) highlighted the fact that grief is a universal feeling of loss. In his trilogy on attachment and loss he concentrated on the major emotional consequences of loss, including feelings of sadness, depression, grief, and bereavement. It is one of the most thorough considerations of loss to appear in the literature. Bowlby's work as a whole was a major contribution to academic thinking about the development of attachment and affectional bonds and the consequences of their disruption. He demonstrated that attachment of the infant to the mother is of overwhelming importance in determining the individual's later sense of security and success in forming relations with others, and that separation from or loss of the mother may have a devastating effect (Bowlby, 1960).

Upon joining Bowlby's research unit at the Tavistock Institute in 1962, Colin M. Parkes—another pioneer in bereavement research—established grief as a possible cause of psychopathology and also found ways of treating grief as an “illness.” Of course, Parkes (1972) did not suggest that grief itself is an illness but he compared loss to a physical injury and set out to study a non-clinical group of widows in their homes to chart the course of nominal adult grief, about which little was known at the time. The findings led to a joint paper with Bowlby (Bowlby & Parkes, 1970) in which separation response was elaborated into four phases of grief during adult life: (a) numbness, (b) yearning and protest, (c) disorganiza-

tion and despair, and (d) reorganization (see also Parkes, 1972).

Mardi J. Horowitz, to whom we are indebted for the very first description of PTSD criteria and symptoms, already in 1974 pointed to a similarity in terms of content between psychotrauma (PTSD) and grief patients (Horowitz, 1974). Horowitz, Bonanno, and Holen (1993) called this family of failure to adapt disorders the “stress-response syndromes” (Horowitz, 1974). This concept is becoming increasingly recognized and may appear as a new area of disorders in the ICD-11 and the DSM-V.¹

Even today, grief patients receive a variety of ICD or DSM diagnoses despite the fact that these may not adequately or consistently describe the difficulties experienced after the loss of a loved one. It has been repeatedly shown that the most commonly assigned classifications for these cases are PTSD, Depressive Disorders, Anxiety Disorder, Adjustment Disorders, and Personality Disorders (Enright & Marwit, 2002). The clinical utility of these labels, however, should be called into question when it comes to CGD (Maercker, 2007).

The point at which the psychological state of a mourning person becomes “pathological” or even a disorder has been widely debated. The debate centers around the extent to which complicated grief (CG)—now the most used term for this condition—represents a truly unique pathological entity, not only when contrasted with normal grief but also with PTSD or major depression. One easy accessible indicator is to listen to clients or patients. Self-statements such as “I fear I will go crazy if I fully realized the death of my loved one” is very specific to CG but not to depression (Boelen, van den Bout, & van den Hout, 2006).

A new diagnostic approach: Prigerson et al.'s joint proposal (2009)

Today, after years of different labeling, the most commonly used label is complicated grief *disorder* (CGD) since the term disorder acknowledges requirement of care. It should be noted that most recently the term “*prolonged* grief disorder” has found strong consensus among leading researchers in the field (Prigerson et al., 2009). However, the majority of clinical and research publications on this condition use the term CGD, and we therefore use this term in the remainder of this paper. Although research over the last two decades on CGD is extensive, no diagnostic algorithm for CGD has yet been agreed upon and tested. Only recently have Prigerson, Horowitz, and other proponents of CGD research

¹During the publishing process of this paper the APA Work Group on Anxiety, Obsessive Compulsive (OC) Spectrum, Post-Traumatic, and Dissociative Disorders Workgroup released their proposal to describe CGD as a new subtype of Adjustment Disorders: “Maladaptive Bereavement Disorder.”

(including the first author of the present paper) reached a consensus on clinical CGD criteria (Prigerson et al., 2009). The consensus resulted from a re-analysis of field trial data from the Yale Bereavement Study (317 participants). These participants were interviewed at baseline and at an average of 6.3 months ($SD = 7$ months) after the loss. The first follow-up interviews were completed approximately 11 months after the loss, and the second follow-up interviews took place approximately 20 months after the loss. CGD symptoms were assessed using an extended rater version of the Inventory of Complicated Grief-Revised (Prigerson et al., 1995). Analyses aimed to derive a set of informative, unbiased symptoms allowing for a complete set of “DSM-style” diagnostic criteria. The researchers used an item response method to derive the most informative symptoms, followed by combinatorial analysis to identify the most sensitive and specific algorithm for the diagnosis of CGD.

The set of diagnostic criteria specifies that a bereaved person with CDG must experience yearning and at least five of nine additional symptoms (Table 1). These symptoms must persist for at least 6 months after the bereavement and must be associated with functional impairment.

Finally, the study showed that individuals given a CGD diagnosis 6–12 months after the death of a loved one have a 2.4 times higher subsequent risk of mental health and functional impairment than people not diagnosed with CGD.

Communalities and differences of complicated grief disorder (CGD) and posttraumatic stress disorder (PTSD)

The new CGD diagnosis (Prigerson et al., 2009) shares some commonalities with the PTSD diagnosis, which is not surprising if it is assumed that these two clinical conditions belong to stress-response syndromes (Table 2). The B-criteria of both disorders address overlapping phenomenological domains: intrusive thoughts and yearning. Whereas intrusive thoughts are defined as painful memories of the trauma, the yearning symptoms are defined as intrusive unfulfilled wishes that the deceased person be present. Both kinds of symptoms may be defined as permanent memory states, involving in PTSD the negative sensory or cognitive-emotional contents of the traumatic experience, and in CGD the bittersweet memories of the deceased person and other related experiences and their cognitive-emotional appraisals. What is shared is the duration of these memories. The difference lies in the emotional valence of these contents: negative for PTSD and bittersweet (negative and positive, often simultaneously) for CGD.

In the current DSM edition, the C-criteria include avoidance and numbing symptoms, and the D-criteria include hyperarousal symptoms. The following CGD

Table 1. Prolonged grief disorder criteria proposed for inclusion in DSM-V (Prigerson, Horowitz and 17 co-authors, 2009)

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- A. Event:** The person has experienced bereavement, i.e., the loss of a significant other
- B. Separation Distress:** The bereaved person experiences separation distress most days and to a disabling degree, as manifest by yearning, longing, craving, or pining for, or preoccupation with the deceased person.
- C. Additional Cognitive, Emotional, Behavioral Symptoms of Grief:** The bereaved person must have 5 (or more) of the following symptoms experienced most days and to a disabling degree:
1. Confusion about one's role in life or diminished sense of self (i.e., feeling that a part of oneself has died)
 2. Difficulty accepting the loss
 3. Avoidance of reminders of the reality of the loss or avoidance of thoughts, activities or situations that arouse intense emotions related to the loss.
 4. Inability to trust others or feeling alone or detached from others since the loss
 5. Bitterness or anger related to the loss
 6. Difficulty moving on with life (e.g., making new friends, pursuing interests, feeling life no longer holds the potential for satisfaction or joy)
 7. Numbness (absence of emotion) since the loss
 8. Feeling that life is unfulfilling, empty, meaningless or unbearable since the loss
 9. Feeling stunned, dazed or shocked by the loss
- D. Timing:** Diagnosis should not be made until at least six months have elapsed since the death.
- E. Impairment:** The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning (e.g., domestic responsibilities).
- F. Relation to Other Mental Disorders:** The disturbance may co-occur with but is not better accounted for by Major Depressive Disorder, Generalized Anxiety Disorder, or Posttraumatic Stress Disorder.
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Table 2. Communalities and differences of CGD and PTSD

	CGD	PTSD
Core symptom group	Yearning symptoms	Intrusive symptoms
First additional symptom group	Avoidance/numbing symptoms	Avoidance/numbing symptoms
Second additional symptom group	Failure-to-adapt symptoms	Hyperarousal symptoms
Minimum duration	6 months	1 month

criteria correspond to avoidance and numbing: C2 (difficulty accepting the loss), C3 (avoidance of reminders or avoidance of thoughts, activities or situations), C4 (Inability to trust/Detachment from others), C7 (Numbness/absence of emotion), C8 (Feeling that life is empty). In contrast to PTSD there are no hyperarousal symptoms for CGD. The remaining symptoms (C1, C5, C6, C9) may be considered as failure-to-adapt symptoms, cf. Horowitz (1974).

Another difference is the duration criteria in order to diagnose the disorder, which is 1 month for PTSD and 6 months for CGD. This implies that one needs at least 6 months to distinguish between healthy adaptation and maladjustment, which is in keeping with cross-cultural studies on the course of grief.

The implications of the commonalities and differences will be discussed below. Indeed, when the core phenomenological symptoms are similar and a further group of symptoms is identical, this should have implications for therapy.

Assessment instruments and questionnaires

The assessment of grief or CGD by self-report measures and interviews has brought many forms and solutions. Here we will give a short chronological overview. The *Texas Revised Inventory of Grief* (TRIG) (Faschingbauer, 1981) is a 21-item scale designed to measure the extent of unresolved or pathological grief. It relates to two points in time: past (immediately or shortly after the death) and present (the time of data collection). Its first 8-item subscale measures feelings and actions at the time of the death (i.e., the extent to which the death affected emotions, activities, and relationships). The second 13-item subscale measures present feelings (continuing emotional distress, lack of acceptance, rumination, painful memories). Although the TRIG does not measure CGD, the individual items reflect typical signs of mourning and grief, such as continuing emotional distress, lack of acceptance, rumination, and painful memories. Prigerson et al. (1995) reported a high correlation with the Inventory of Traumatic Grief (see instrument below in detail). The authors' claim that parts 1 and 2 over time might indicate different stages of grief resolution, however, has been criticized (Neimeyer & Hogan, 2001). Nevertheless, the TRIG remains a classic scale to measure the impact of a loss.

The Hogan Grief Reaction Checklist (HGRC) (Hogan, Greenfield, & Schmidt, 2001) is a 61-item instrument with six subscales: despair, panic behavior, blame and anger, disorganization, detachment, and personal growth. It has been primarily used for assessing grief in parents of deceased children. Znoj (2006) used this scale in an attempt to replicate assumed strong associations between personal growth and other HGRC subscales, but he failed to replicate it.

In the meantime, the most commonly used assessment tool in the area is the Inventory of Complicated Grief (ICG). It was developed by Prigerson and colleagues (1995) and focuses on symptoms that are distinguishable from symptoms of depression and anxiety (e.g., reactions such as preoccupation with thoughts of the deceased, disbelief about the death, and non-acceptance of its reality). Moreover, the ICG was designed to distinguish between normal reactions and more pathological forms. The ICG consists of 19 items (e.g., "ever since she died it is hard for me to trust people"). Its convergent and discriminant validity yielded excellent results. High ICG values were associated with a lower quality of life. Moreover, scores at 6 months after loss predicted risk of cancer, high blood pressure, heart trouble, smoking, eating problems 1–2 years later (Prigerson et al., 1997).

In an attempt to compare the ICG with Horowitz's concept of CGD, Forstmeier and Maercker (2007) conducted a comparative study using a 30-item questionnaire according to the Horowitz model (Horowitz et al., 1993). They found only a small convergent validity between the two assessments. The authors concluded that the main reasons for this non-convergence were the number of symptoms or criteria that had to be present in order to diagnose CGD.

For the most recent consensus criteria on CGD (see above; Prigerson et al., 2009), no validated clinical assessment has so far been published. However, recently the PG-13 has been developed by Prigerson's group (Prigerson, Venderwerker, & Maciejewski, 2008) and it has already been used in several studies (e.g., Schaal, Jacob, Dusingizemungu, & Elbert, 2010). It is a promising tool to investigate CGD in various populations and has the advantage of being short and comprehensive.

Aside from the core symptoms of grief, there is a growing interest in looking deeper into cognitions or feelings associated with the state of bereavement. For instance, Boelen and Lensvelt-Mulders (2005) developed an instrument to assess specific cognitions that might become a risk factor for developing a grief-related disorder, such as self-blaming or judging one's own feelings as inappropriate.

Epidemiology

So far there are no methodologically sound studies that provide information about the prevalence of CG in the general population. Two figures are of particular interest: first, the general prevalence (e.g., 1-year prevalence), second, the conditional probability, that is, the proportion of bereaved persons who develop CGD. Various authors found probabilities between 10% and 30% (Znoj, 2004), implying that almost one-third of all bereaved develop CGD.

So far the only epidemiological study is that of Maercker et al. (2008). However, it includes only elderly

people (60–94 years old). In the Swiss population within this age group, 4.2% of the 712 participants were diagnosed with CGD (based on the Horowitz criteria). Women were diagnosed more often: 5.8% of all women, against 2.1% of men. The conditional probability was 16%, meaning that one out of six had the disorder. Patients with CGD had 1.9 (SD 1.0) co-morbid psychiatric disorders with sub-threshold depression as the most frequent co-morbid condition. Further, 17% were receiving psychopharmacological treatment, but not one CGD patient was in therapy.

In Japan, an epidemiological screening study was recently conducted (Fujisawa et al., 2010) using a five-item scale that evaluated intrusions, avoidance, estrangement from others, trouble accepting the death, and interference of grief in daily life. Participants were 40–79-years old; however, the study included only participants who reported bereavement, which may be a bias because there are people in the general population who do not report bereavement at all. The authors found what can be considered a conditional probability of 2.4% in that population. Both studies converged, despite methodological differences, on the finding that CGD patients are few in the general population. Furthermore, their number is age-dependent. Indeed, for biological reasons, older people are more likely to be affected by bereavement over persons in their social network.

Preventive and treatment approaches

Before discussing recent advances in treatment, new approaches to prevent CGD will be summarized. Interestingly, while treatment approaches are informed by the work within the PTSD field, current preventive approaches are mostly not. Only a few prevention programs have proven effective, and many must be considered ineffective (Stroebe, Hannson, Stroebe, & Schut, 2008). Not every well-intentioned preventive approach meets with success.

The first prevention study we report had no beneficial effects. De Groot et al. (2007) conducted a prevention program for a specific group of bereaved: survivors of a relative who had committed suicide. The prevalence of CGD is considered to be high in this population. Specialized nurses visited patients at home. The program consisted of four 2-hour sessions, with 2–3 weeks between each session; most of the time they were family sessions. The preventive program offered (1) psycho-education, (2) cognitive restructuring, (3) consolidation of interpersonal support, (4) improvements for problem solving including urgent problems, and (5) bibliotherapy. A total of 122 first-degree relatives of 70 people who had committed suicide took part (mean age 44 years, SD 17 years). No significant reduction effect was found for the Inventory of Traumatic Grief (Prigerson et al., 1995). These results

remain unsatisfactory and are probably not sufficiently disorder and population specific.

Fortunately, Wagner and Maercker (2008) found effective forms of prevention. They conducted a structured preventive program on the internet within the bereavement counseling center of a Catholic diocese in Germany. It consisted of a 3-week manualized program including the following modules: (1) describing the circumstances of the death in a text, (2) exploring the “life-imprint” of the deceased on the surviving person, (3) keeping a daily diary of social activities and sleep hygiene, (4) cognitive restructuring of dysfunctional thoughts, such as responsibility for the death and feelings of guilt, (5) communication with the family, (6) gender-specific coping with bereavement, and (7) formation of a continuing bond with the deceased.

In this pilot study without a control group, 35 bereaved individuals (mean age 42 years, SD 9 years) took part who had experienced a loss within the last year. The sample can be regarded as a highly stressed one because 57% had lost a child and 21% a partner; 82% were unexpected deaths. Participants in the preventive program reached a significant reduction in symptoms of CGD and depression. For example, CGD symptoms assessed by the Horowitz criteria were reduced by an effect size of $d=2.0$, whereas depression (HADS) was reduced by $d=0.44$ (Wagner & Maercker, 2008). It can be concluded that some or all modules of this program were helpful (further disentangling studies must clarify this), such as the life imprint exercise proposed by Neimeyer (2002) where participants were asked to write an assignment reflecting on the imprint that the relationship with the deceased person had left in their life. They were instructed to reflect on the biographical meaning the deceased person had for them, as well as on how their own behavior, personality, and thinking had been influenced by the deceased person. This method is close to the life-review approach used for PTSD (Maercker, 2002).

In the following, current treatment approaches to CGD will be outlined. Katherine Shear’s approach to treating CGD has become widely recognized (Shear, Frank, Houck, & Reynolds, 2005). This approach was essentially informed by the imaginal and *in vivo* exposure techniques used for PTSD, including the confrontational technique of “revisiting” the deceased loved one. In this technique, the therapist asks patients to close their eyes and tell the story of the death. The therapist tape-records the story and periodically asks the patient to report distress levels. The patient is given the tape to listen to at home during the week. Distress related to the loss (e.g., yearning, longing, reveries, and fears of losing the deceased forever) is targeted using techniques to promote a sense of connection to the deceased. These include an imaginal conversation with the deceased that is conducted with the patient’s eyes closed. This technique is complemented by

preceding psycho-education and a subsequent “restoration of life goals” phase. Shear et al. (2005) compared this newly developed treatment to standard interpersonal psychotherapy (Weissman, Markowitz, & Klerman, 2000). The results were much in favor of Shear’s CG treatment, so that this treatment approach is now being disseminated around the world.

This exposure-based treatment was studied in a modified form by Boelen, Keijsers, van den Hout, and van den Bout (2007). They examine different sequences of exposure and cognitive restructuring. Exposure began with the writing of distressing memories and included in sensu exposure during the sessions. Cognitive restructuring focused on individual dysfunctional thoughts (e.g., guilt, anger). The evaluation was made halfway through therapy. The exposure phase that followed brought more improvement than the CR phase. Conducting the exposure first followed by CR, yielded the best results.

Because no other approaches have been shown to be effective aside from those tested in these randomized trials, we will now present our own web-based approach for CGD (Wagner, Knaevelsrud, & Maercker, 2006). This approach also begins with a technique of self-confrontation similar to that used for PTSD (Lange et al., 2003) consisting of a written assignment. Patients are asked to write four texts in which they describe the circumstances of their bereavement and their thoughts and feelings at the time. The therapist facilitates the non-avoidance of fear related to these memories. The cognitive restructuring is then based on these accounts. Most of the time feelings of guilt or a sense of responsibility in the death of the loved one are dealt with. Patients are then asked to write a supportive letter to a friend who finds him- or herself in exactly the same situation. A further intervention consists in establishing rituals or activities to commemorate the deceased. The aim is to give the deceased a place in everyday life, to reorganize priorities, and to see whether the patient would be able to re-connect with friends and social life. Within 10 weeks, patients write a total of 10 assignments upon which they receive individual feedback from their therapist via e-mail, within one workday.

Being a web-based intervention, the group of patients was a highly selective one. There were a number of exclusion criteria that were necessary due to the virtual nature of the relationship between patient and therapist. Therapy success was measured using the stress-response concept of Horowitz et al. (1993), based on the parameters of intrusive thoughts, avoidance, and failure to adapt. In an randomized controlled trial with a waitlist control condition, the effect sizes were in the range of 1.2–1.5, and 1.2–1.6 for pre-treatment to 3-month follow-up. Follow-up measures at 18 months confirmed the stability of these effect sizes (Wagner & Maercker, 2007); see Fig. 1. At post-treatment, 81% were healthy (i.e.,

below the clinical threshold), against 33% in the control group. Further, 73% said they had not missed face-to-face contact with their therapist (missed: 20%, don’t know: 8%).

Wagner, Knaevelsrud, and Maercker (2007) examined other outcomes besides CGD, in particular post-traumatic growth and naive optimism. The goal was to establish the fact that therapy did lead to positive functional change and not dysfunctional change (operationalized as naive optimism). Results confirmed this hypothesis. Functional change in the five domains of posttraumatic growth (new possibilities, relating to others, appreciation of life, personal strength, spiritual change) did take place, but no significant increase in optimism was observed. This result may be summarized in the following common saying: patients got sadder but wiser through the process of grief and its treatment.

All the studies reported here show that in an individual setting (one patient, one therapist) good therapeutic success can be achieved with exposure and cognitive restructuring. The efficacy of these two standard modules, which are also found in therapy for PTSD, will perhaps be enhanced with a third module consisting of social sharing (like Wagner et al., 2006). The sharing of pain with others in an appropriate way, so that close relationships do not become dysfunctional, seems to be an important issue (an issue as yet overlooked in PTSD treatment) (Maercker & Horn, 2010). Social sharing as a treatment goal may also be specifically suited for group treatments of CGD.

Before concluding, we will point to an e-health innovation: Botella, Osma, Gracia Palacios, Guillen, and Banos (2008) reported on a case study of a CGD treatment using a virtual reality environment (EMMA’s world). EMMA’s world provides different tools to deal with negative emotions (e.g., sadness, anger, anxiety) and is complemented by self-exposure to painful memories about the loss. The single case was successfully treated with the effects remaining stable up to the 12-month follow-up.

Further threads in complicated grief disorder (CGD) research and conclusion

Proper research on a (new) psychological disorder must not focus on diagnostics, assessment, prevention, and treatment alone. When reviewing PTSD research it is impressive to observe that research on risk or protective factors and the advancement of disorder models have promoted an understanding of and communication about the disorder. Due to the scope of the current paper it is not possible to comprehensively cover these latter aspects. However, it should be noted that the recent edition of the “Handbook of Bereavement: Research and Practice” by Stroebe and colleagues (2008) provides a comprehensive

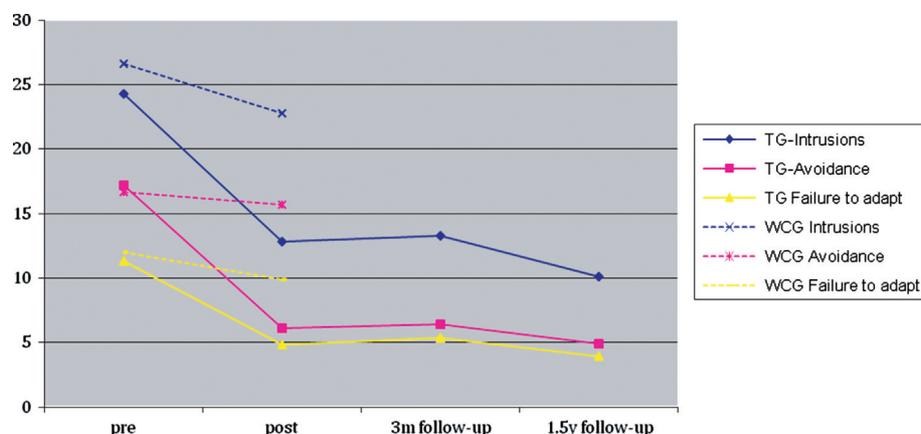


Fig. 1. Results of a randomized treatment trial of web-based cognitive-behavioral therapy of CGD (Wagner et al., 2006; Wagner & Maercker, 2008).

collection of the major theories and impulses on these aspects.

The most influential systematic model of grief in general, the dual process model, was proposed in concordance with Rubin's (1992) earlier two-track model of bereavement, by Stroebe and Shut (1999). They proposed that a loss-oriented process (i.e., the mitigation by self-confrontation or avoidance allowing an individual to rebuild their life) has to be distinguished from a restoration-oriented process (i.e., coping with the loss by engaging in new relationships and tasks). According to the model, these two processes represent individual differences in terms of alternatives or individual styles used by different people but may, however, also occur within the same person as an alternating (or oscillating) process. The authors note that both are important for eventual adaptation to the loss, and that oscillation between the two enables the occurrence of a balanced recovery. For stress-response disorders in general, Horowitz's (1978) model of working by following a traumatic event mentions the oscillation between phases of intrusion and phases of avoidance as a necessary process for adaptation that can be seen as a preliminary dual-process model.

Interestingly, the dual-process model only consists of psychological factors, whereas the most influential models of PTSD emphasize basic memory processes and are more closely related to neuroscience. Admittedly, few other approaches in CGD research involve neurobiology, such as, for example, genetic factors (Kersting et al., 2007) or brain activity patterns (O'Connor et al., 2008).

A good fit can be found between the dual-process model (Stroebe and Shut, 1999) and deepened investigation of risk factors such as has been shown for cognitive-emotional changes after bereavement (Znoj, 2004). One example is that loss-oriented processes are typical cognitive-emotional reactions that accompany the feeling of injustice or anger associated with loss and that may vary

in degree from moderate to exaggerated. Anger over the circumstances of the death of a loved one could lead to more severe grief, especially when the death is perceived as unjust, such as in the case of the death of a child. Znoj and coworkers (Znoj, Morgenthaler, & Zwingmann, 2004) investigated bereaved parents and found high correlations between the feeling that fate is unjust and increasing psychopathology. Orth and Maercker (2009) demonstrated that anger, in addition to PTSD symptoms, leads to further aggravation of symptoms. With regard to loss-oriented processing, PTSD and CGD may not be too different.

For restoration-oriented processes, the differences between CGD and PTSD are more apparent. In PTSD, people typically fail to assimilate their experiences and have prevailing perceptions of their fundamental beliefs and specific experiential readiness. The consequence of PTSD is a persisting inconsistency warning signal, accompanied by strong negative emotions which result in the psychological system being constantly preoccupied with detecting dangerous inconsistencies (Grawe, 2004; Znoj, 2004). In contrast, in CGD the predominant feeling is not threat but loss-related distress. The persisting inconsistency concerns lack of affiliation. Znoj and Grawe (2000) have suggested that striving for consistency between prevailing experiences and expectations form the basis for patients' ongoing failure to adapt.

Failure to adapt following a major loss may not only lead to a complicated or prolonged grief disorder but also to other forms of psychopathology such as depression or panic disorder. It is probably of the highest importance not only to look at grief-specific symptoms but also to the individual processes of coping. Just recently, Coifman and Bonanno (2010) were able to show that context sensitivity for negative emotions at 4 months post bereavement predicted fewer depression symptoms at 18 months. In addition, our own work (e.g., Znoj, 2008; Znoj & Keller, 2002) has shown that processes of emotion

regulation may lead to completely different outcomes after the loss of a loved one. Also the important role of cognitions as mentioned elsewhere in this article have to be taken into consideration for predicting clinical outcomes.

In conclusion, we regard CGD to be the younger sibling of PTSD and have tried to illustrate this view. We believe there are both characteristic similarities and differences between the siblings. Effective preventive and treatment approaches are already available, and most of them have been deduced from PTSD therapy rationales. However, since contemporary theoretic contributions to and models of CGD are still relatively scarce, many more researchers and clinicians must contribute to a more comprehensive understanding of individuals who fail to overcome their grief so as to establish effective treatment modalities.

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