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EFFECTS OF DIRECTED WRITTEN DISCLOSURE ON GRIEF AND DISTRESS SYMPTOMS AMONG BEREAVED INDIVIDUALS

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Abstract

Bereavement-specific written disclosure trials have generally demonstrated null effects, but these studies have not directed the focus of writing. This randomized controlled trial compared directed writing that focused on either sense-making or benefit-finding, both associated with adjustment to loss, to traditional, non-directed emotional disclosure and a control condition. Bereaved undergraduates ($n = 68$) completed three 20-min writing sessions over 1 week. Intervention effects were found on prolonged grief disorder, depressive, and posttraumatic stress symptoms 3 months postintervention, and the benefit-finding condition appeared particularly efficacious. Physical health improved over time in all treatment groups. Findings suggested that directing written disclosure on topics associated with adjustment to bereavement may be useful for grieving individuals.

Written disclosure interventions, in which individuals express their thoughts and emotions about traumatic or stressful life events, have been associated with improvements in both psychological and physical health (Frattaroli, 2006; Pennebaker & Beall, 1986; Pennebaker & Seagal, 1999; Sloan & Marx, 2004b; Smyth, 1998). However, in its traditional format, this intervention has not appeared efficacious for bereaved individuals asked to disclose their thoughts and feelings about their loss experience. Although the majority of these “bereavement-specific” written disclosure studies have reported a reduction in grief symptoms and an improvement in psychosocial functioning over time in both the experimental and control conditions, they have not consistently found specific effects of the emotional disclosure (ED) task (Bower, Kemeny, Taylor, & Fahey, 2003; Range, Kovac, & Marion, 2000; Stroebe, Stroebe, Schut, Zech, & van den Bout, 2002). The null results are perplexing given that the benefits of disclosure have been observed in various populations writing about a broad range of stressful events, including interpersonal loss (Pennebaker, Colder, & Sharp, 1990; Stroebe et al., 2002; Stroebe, Schut, & Stroebe, 2005). In addition, writing seems like an appropriate vehicle for the confrontation and processing that is widely believed to be a part of working through grief (Stroebe, Schut, & Stroebe, 2006). In search of explanations for the non-effects, researchers have suggested several factors that may play a role in responsiveness to bereavement-specific writing, including selection of a focused writing topic (Stroebe et al., 2006).

Directed Writing: Making Meaning of Loss

What types of writing topics may be helpful for individuals who have experienced the loss of a significant relationship? Bereaved individuals may benefit from focusing their writing in ways that help resolve grief and facilitate adjustment. There have been many indications in the bereavement literature that making meaning of one's loss experience is therapeutic for grieving individuals (Davis & Nolen-Hoeksema, 2001; Neimeyer, 2000; Neimeyer, 2005; Neimeyer, Prigerson, & Davies, 2002; Stroebe & Schut, 2001; Tedeschi & Calhoun, 2004). However, the writing instructions previously tested in bereavement-specific written disclosure studies have been nondirected, inviting participants to write about their general thoughts and feelings related to their loss rather than directing them to engage in specific therapeutic tasks like meaning-making.

Meaning has been used to represent at least two different concepts in the literature: sense-making (SM) and benefit-finding (BF). Davis, Nolen-Hoeksema, and Larson (1998) found that both constructs were independently associated with adjustment to loss. SM involves making sense of an event through, for example, determining the cause of the event, based on previously held assumptions about oneself and the way the world works (Davis et al., 1998). It could include, for example, attributing a death to unhealthy behaviors or to the will of a higher force. BF involves consideration of the global significance of a loss on one's goals, values, and personal growth, such as becoming closer with one's family or developing a greater appreciation of life (Affleck & Tennen, 1996; Davis et al., 1998; Sears, Stanton, & Danoff-Burg, 2003). It refers to the positive changes such as increased appreciation of life and improved relationships, which individuals often report following adverse events such as trauma, disease, and loss (Davis et al., 1998; Tedeschi & Calhoun, 2004). Holland, Currier, and Neimeyer (2006) found that SM more strongly predicted adjustment than BF among individuals within two years of a loss.

Meaning-making (i.e., SM and BF) appears to occur naturally for many individuals (Davis & Nolen-Hoeksema, 2001), but can it be facilitated through psychosocial interventions for those who find it more challenging? A substantial literature suggests that it can be fostered through therapeutic exercises (Neimeyer, 2000; Park & Blumberg, 2002; Shear, Frank, Houck, & Reynolds, 2005). There is empirical evidence indicating that BF in particular can be enhanced (Antoni et al., 2001; Ullrich & Lutgendorf, 2002) and that it is associated with positive physical health outcomes (Crueess et al., 2000; Stanton et al., 2002). It is not clear whether or not directing individuals to write about the meaning of their loss experience has similar value for bereaved individuals (Neimeyer et al., 2008). In a study of women who had lost a close relative to breast cancer and believed that they were at increased risk for the disease, Bower et al. (2003) did not find support for their hypothesis that written disclosure would result in participants finding meaning in their loss. However, the instructions provided in the disclosure condition did not direct the women to discuss positive changes (Bower et al., 2003). This may in part explain their null results.

Prolonged Grief Disorder (PGD)

Similar to the written disclosure trials noted above, a large number of non-writing grief intervention outcome studies have been unable to demonstrate treatment efficacy (Currier, Neimeyer, & Berman, 2008; Schut, Stroebe, van den Bout, & Terheggen, 2001). Prior investigations have commonly examined treatment efficacy by assessing normal grief symptoms. Because normal grief remits naturally, a study would need to demonstrate that an intervention is more beneficial than the passage of time. Thus, researchers have suggested assessing and targeting more pathological bereavement reactions, which are less likely to resolve without assistance, so that those in greater need might benefit from treatment

(Jordan & Neimeyer, 2003; Schut et al., 2001). However, no bereavement-specific written disclosure studies have specifically assessed PGD symptoms to test this hypothesis.

PGD, formerly known as complicated grief and traumatic grief, is a pathological reaction to loss representing a cluster of empirically-derived symptoms that have been associated with long-term physical and psychosocial dysfunction (Lichtenthal, Cruess, & Prigerson, 2004; Prigerson & Jacobs, 2001; Prigerson, Vanderwerker, & Maciejewski, 2008). Individuals with PGD experience severe grief symptoms for at least six months; in other words, they may appear “stuck” in a maladaptive state (Prigerson et al., 2008). Because PGD does not appear to dissipate with time (Prigerson & Jacobs, 2001), individuals experiencing elevated PGD symptoms may benefit from psychosocial interventions, including bereavement-specific written disclosure, more than individuals exhibiting normal, uncomplicated grief (Shear et al., 2005).

Current Study

Although other types of expressive writing studies have used specific directed writing instructions (Frattaroli, 2006; Gidron et al., 2002; King & Miner, 2000; Sloan, Marx, Epstein, & Lexington, 2007; Stanton et al., 2002; Ullrich & Lutgendorf, 2002), prior investigations of bereavement-specific written disclosure have generally not directed the writing focus, despite researchers’ suggestions that doing so may result in physical and mental health benefits (King & Miner, 2000; Lepore, Greenberg, Bruno, & Smyth, 2002; Stanton et al., 2002; Ullrich & Lutgendorf, 2002). The current randomized controlled trial (RCT) addressed the question of how writing topic may influence intervention outcomes by testing the effects of directed writing instructions. The standard bereavement-specific written disclosure protocol was modified to direct participants to write either about how they make sense of their loss (SM) or about positive changes that came about as a result of their loss experience (BF). These novel, directed, meaning-making conditions were compared to traditional, nondirected ED and to a neutral writing condition (control condition [CC]).

Among bereaved college students, difficulty making sense of a violent loss has been associated with elevated PGD symptoms (Currier, Holland, & Neimeyer, 2006), and SM (Holland et al., 2006) and BF (Neimeyer, Baldwin, & Gillies, 2006) have been associated with decreased PGD symptoms. Based on such suggestions in the literature, we hypothesized that the SM and BF conditions would be more effective in reducing PGD, depressive, and posttraumatic stress disorder (PTSD) symptoms and in improving physical health markers than either the ED or CC conditions.

Method

Participants

Participants were undergraduate students who reported experiencing a significant interpersonal loss. Inclusion criteria were as follows: (a) were age 18 or older; (b) experienced an interpersonal loss that was considered significant; (c) were willing to write and answer questions about this loss experience; (d) grew up with English as their first language, or were able to comfortably “think” and write in English; and (e) had the ability to provide informed consent. There were no exclusion criteria for the study.

This study was advertised online to students in introductory psychology courses and through flyers detailing the inclusion criteria that were posted in campus buildings. Participants were screened to confirm that they met the inclusion criteria and were offered course research credit or financial compensation. In order to increase the probability of selecting a sample

exhibiting some distress, “a significant interpersonal loss” was defined during the screening process as one “that had a great impact on them or perhaps that they are still grieving.”

Two hundred and forty students responded to advertisements for this study. Of these 240, 161 completed the screening questionnaire, were eligible, and provided informed consent for the study. Of the 161 who consented to participate, 139 participants completed baseline and postintervention assessments and all three writing sessions. Reasons for attrition included difficulty managing the time commitment required, scheduling problems, and failure to follow study protocol. Non-completers of the intervention did not return their study packets, including baseline data, and so comparisons between completers and non-completers could not be made. Seventy-nine participants (57%) completed the T3 assessment, and the current study focuses on the 68 participants who both completed T3 and experienced a death loss. The study flow is illustrated in Figure 1.

The 68 (36 women, 32 men) participants included in the subsequent analyses were randomized to either the ED ($n = 16$), SM ($n = 19$), BF ($n = 17$), or CC ($n = 16$) condition. Study participants were undergraduates and had an average age of 19.7 years ($SD = 3.5$; range = 18–40 years). The majority of participants were unmarried (89.7%), but some participants were married/partnered (5.9%), widowed (2.9%), or separated (1.5%). This was a moderately ethnically and racially diverse sample, with 66.2% identifying as Caucasian, 14.7% Asian American, 4.4% African American, and 4.4% Hispanic (10.3% identified as other). Participants were also diverse in their religious identification, with 30.9% Christian (non-Catholic), 27.9% Jewish, 13.2% Catholic, 14.7% another religion, and 13.2% with no religious affiliation. Table 1 presents additional participant and loss-related characteristics, including the relationship to the lost individual and time since the loss. At baseline, there were no significant differences between groups on any relevant demographic or loss characteristic variables (all $ps > .10$), indicating that randomization was successful.

Procedure

The protocol and related materials for this study were approved by the University of Pennsylvania Institutional Review Board (IRB). Eligible individuals who consented to participate in the study were randomly assigned one of four conditions: ED, SM, BF, or CC condition. In the ED condition, participants were asked to write about their deepest thoughts and emotions related to their loss. In the SM condition, participants were asked to focus on making sense of the event by exploring what causes they attributed the loss to and by constructing a narrative about how this event fit into their lives and into their assumptions about the way the world works. The BF condition instructed participants to focus on any positive life changes that have come about as a result of their loss experience. In the CC, participants were asked to describe the room in which they were seated and to minimize expression of emotion in their writing. The instructions provided to participants are presented in Figure 2. Participants completed three 20-min writing sessions, as is typical in written disclosure studies (Pennebaker & Beall, 1986; Pennebaker & Seagal, 1999), in their homes or any location that had privacy and Internet access over the course of one week. All writing samples were collected and screened for distress using the Blackboard Learning System (Release 6), through which individuals could type and submit their essays confidentially (i.e., only the investigators had access). A recent meta-analysis found that mode of disclosure (typing, handwriting, or talking) did not moderate treatment effects in written disclosure outcome studies (Frattaroli, 2006). Participants were provided with one packet for each session containing explicit instructions, emergency contact information, and assessment measures.

A baseline assessment (T1) that included the measures described below was administered prior to writing during Session 1. The same battery of questionnaires was administered at the

conclusion of Session 3 (T2). A three-month follow-up assessment (T3) was conducted after the conclusion of the intervention via the Internet.

Measures

DEMOGRAPHIC INFORMATION—Participants were asked to provide basic demographic information (e.g., age, gender, ethnicity, religion) and information about the loss on which they were focusing, including a description of their relationship to the lost individual (e.g., child, grandchild, friend, etc.) and the amount of time since the loss. They were also asked to report whether they had previously been or were currently in psychotherapy. The demographic information measure was administered during T1.

PGD SYMPTOMS—Participants completed the Inventory of Complicated Grief—Revised-Short Form (ICG-R-SF; unpublished), which is based on the long form of the Inventory of Complicated Grief (Prigerson et al., 1995). The ICG is an empirically derived, validated, and reliable measure based on earlier incarnations of the diagnostic criteria for PGD (previously referred to as complicated grief). It has been used with and validated in numerous clinical and nonclinical samples (Prigerson et al., 2002; Shear et al., 2005; Simon et al., 2005), including bereaved undergraduates (Hardison, Neimeyer, & Lichstein, 2005). The revised short form of the ICG, the ICG-R-SF, is an 17-item self-report measure that assesses the frequency and severity of maladaptive symptoms of grief experienced over the past week. Specifically, the measure contains four items evaluating separation distress symptoms (i.e., preoccupation with thoughts about the deceased, feeling drawn to places associated with the deceased, yearning for the deceased, and loneliness) and 11 items evaluating traumatic distress symptoms (i.e., avoidance, future feeling meaningless, a sense of numbness, stunned about death, disbelief about death, life feeling meaningless, life lacking fulfillment without deceased, feeling part of self has died, overwhelming change in worldview, physical identification with the deceased, and overwhelming bitterness). Items are rated on a 5-point Likert scale from 1 (*never/none*) to 5 (*always/extremely*), and thus scores can range from 11 to 55. The measure additionally contains duration and impairment criteria items, asking participants whether the endorsed symptoms have persisted for at least six months as well as whether or not they are causing functional impairment. The ICG-R-SF was administered during T1, T2, and T3. Cronbach's α of the ICG-R-SF in the total available sample ($n = 139$) at T1 was .89.

DEPRESSIVE SYMPTOMS—Participants completed the Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977) at T1, T2, and T3. The CES-D is a widely used, validated, and reliable (Cronbach's α values $>.85$ across samples; Radloff, 1977) 20-item self-report measure of depressive symptoms experienced in the past week. Symptom frequency is rated on a 4-point Likert scale. Scores range from 0 to 60, with higher scores reflecting endorsement of more frequent depressive symptoms. Studies have shown that scores ranging from 16 to 26 reflect mild depression, and scores ranging from 27 to 60 reflect major depression (Zich, Attkisson, & Greenfield, 1990).

PTSD SYMPTOMS—PTSD symptoms were assessed by the Posttraumatic Stress Checklist-Civilian Version (PCL-C; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996) at T1, T2, and T3. The PCL-C is a reliable measure (Cronbach's α .89; Weathers, Litz, Herman, Huska, & Keane, 1993) of posttraumatic stress levels through self-report evaluation of PTSD symptoms, which are rated on a 5-point Likert scale from 1 (*not at all*) to 5 (*extremely*). There is a total of 17 items reflecting each of the three PTSD symptom clusters: reexperiencing, avoidance/numbing, and hyperarousal. Scores can range from 17 to 85, and a total score of 50 or greater is considered to reflect active PTSD.

PHYSICAL HEALTH—A composite physical health index (PHI) measure was created by combining participants' self-reports of their number of medical appointment (including student health) visits and number of days sick over the past three months with the number of physical health symptoms in the past seven days, measured at T1 and T3. The PHI score was the sum of the simple ranks of each of these three variable values.

ESSAY EVALUATION FORM—This form, similar to those commonly used in written disclosure studies (Bower et al., 2003; Pennebaker & Beall, 1986; Range et al., 2000), was administered immediately after writing each essay during Sessions 1 (T1) and 3 (T2) and evaluated retrospectively at T3. Participants were asked to rate their essays and factors related to their loss experience, and all items were rated on a 7-point Likert scale. Items assessing to what extent the essays were personal, generally helpful, revealing of emotions, helpful in making sense of one's loss, and helpful in finding benefits from one's loss experience.

Statistical Analyses

The participants in each treatment condition were compared on demographic, medical, and outcome variables using one-way analyses of variance (ANOVAs) for continuous variables and χ^2 tests for nominal variables to ensure that the groups were comparable and that randomization was successful. The experimental conditions were compared from baseline (T1) to follow-up (T3) using repeated-measures ANOVAs (RMANOVAs) or analyses of covariance (RMANCOVAs), the most common analytic approach in bereavement-specific written disclosure studies, for each psychological outcome measure. We controlled for key selected demographic variables significantly associated ($p < .05$) with the outcome measures at baseline. Although the current study was limited by substantial attrition by T3 and, consequentially, a reduction in power and a potential selection bias, we nevertheless conducted planned analyses for each outcome with the reduced sample with these limitations in mind. All those individuals who returned T2 assessments also completed the intervention. Effect sizes were estimated by partial eta-squared (η_p^2) values, reflecting the association between a given factor or effect and the outcome variable (i.e., the proportion of the variance accounted for by a given factor in the outcome; Pierce, Block, & Aguinis, 2004).

Results

Participant Characteristics

There were no statistically significant group differences on any participant characteristics, including demographic characteristics and baseline (T1) measures (all $ps > .10$). See Table 2 for T1 outcome measures means and standard deviations. As stated above, quantitative and categorical covariates were selected by conducting either a bivariate test of association or a one-way ANOVA among key selected demographic variables and the main outcome measures that were significant at the $p < .05$ level. Baseline PGD symptom levels were greater among individuals who had lost a first-degree relative ($p = .001$). Women ($p < .001$) and individuals with a history of psychotherapy ($p = .037$) had significantly higher baseline physical health index scores than their counterparts. In addition, participants currently engaged in psychotherapy at T1 had higher PGD ($p = .047$), depressive ($p = .003$), and PTSD ($p < .001$) symptoms as well as higher physical health index scores ($p = .003$). Thus, based on a priori selection criteria we statistically controlled for these variables in subsequent analyses.

Attrition

Several attempts were made by e-mail and telephone to contact participants to invite them to complete the T3 assessment, which frequently coincided with summer and winter university breaks. There was a substantial attrition rate (40%, $n = 46$) by T3, with 18 (53%) participants lost to follow-up from the ED group, 8 (30%) from the SM group, 9 (36%) from the BF group, and 11 (41%) from the CC group. However, attrition rates did not differ between the groups, $\chi^2(3, N = 114) = 3.89, p > .100$. We found that participants who did not complete the T3 assessment were generally more distressed at baseline, with significantly higher T1 levels of PTSD symptoms, $F(1, 113) = 10.79, p = .001$. Although the proportions of participants lost to follow-up did not significantly differ between the four conditions, poorer psychological health at baseline may have played a role in participants' choice or availability to complete the T3 assessment.

Manipulation Check and Meaning-Making Ratings

The essays were evaluated by independent raters, and participants in each of the four conditions generally followed the instructions they were given. Essay evaluations confirmed that the experimental manipulations differed from the neutral writing condition and revealed additional differential treatment effects. One-way ANOVAs of essay ratings at T1, T2, and T3 were conducted to examine group differences in participants' evaluation of their assigned writing intervention. Immediately following completion of their first and third essays, participants rated the active writing conditions as significantly more personal ($ps < .001$), helpful ($ps < .001$), and revealing of emotions ($ps < .001$). Participants additionally reported immediately postintervention at T2 that completion of the essays was helpful in making sense of their loss, $F(3, 63) = 11.86, p < .001$; and helpful in finding benefit from their loss experience, $F(3, 63) = 10.28, p < .001$. Tukey HSD and Games-Howell post-hoc pairwise tests demonstrated that mean ratings for the majority of these dimensions were significantly higher when each of the three active experimental groups (ED, BF, and SM) was compared to the CC group (all $ps < .001$). These findings were also statistically significant in the retrospective assessment of the writing exercises administered at T3 ($ps < .020$). The exception was helpfulness in finding benefit, for which the only statistically significant difference was found between the BF and CC conditions. The essay evaluation ratings not only corroborated that the three experimental manipulations were distinct from the CC, but also demonstrated that the meaning-making conditions were perceived as more helpful than traditional ED.

To determine whether perceptions about ED and meaning-making were associated with the study outcomes, bivariate associations between the T3 outcomes and the SM, ED, and BF ratings obtained at each time point were examined within each of the experimental conditions. In the ED group, the degree to which participants rated writing as helpful with BF at T3 was associated with better physical health functioning, $r = -.52, p = .040$. In the BF group, the extent to which participants rated writing as helpful with benefit-finding at T1 was associated with both T3 depressive symptoms, $r = .51, p = .041$; and T3 PTSD symptoms, $r = .61, p = .011$. In the SM group, PGD symptoms were associated with the degree to which participants rated writing as helpful with sense-making at T1, $r = .47, p = .045$; and physical health markers were related to the extent to which participants reported they revealed their emotions at T3, $r = .47, p = .044$. None of these ratings were significantly associated with the SM, ED, and BF ratings in the CC condition ($ps > .10$).

Written Disclosure Effects at Follow-Up

We conducted RMANOVAs and RMANCOVAs to examine changes in the psychological and physical health measures from T1 to T3, controlling for relevant covariates. Although

the reduction in sample size resulted in a considerable decrease in power, we analyzed the data as planned in order to identify data trends that could aid in future hypothesis generation.

A significant Group $\times$ Time interaction effect on PGD symptoms emerged when examining each of the four conditions controlling for degree of relationship to the deceased and current psychotherapy status, $F(6, 94) = 3.03, p = .009, \eta_p^2 = .15$. Figure 3 illustrates the changes over time. PGD symptoms decreased from T1 to T3 in each of the active writing groups, but were not sustained in the CC group. Reductions in PGD symptoms were particularly pronounced in the BF group, although statistically nonsignificant within group likely due to small sample size ($p > .100$).

When controlling for current psychotherapy status, significant Group $\times$ Time interaction effects also emerged for depressive symptoms, $F(6, 122) = 2.72, p = .016, \eta_p^2 = .12$; and for PTSD symptoms, $F(6, 122) = 4.31, p = .001, \eta_p^2 = .18$. Reductions in depressive and PTSD symptoms were observed in all groups by the three-month follow-up. Similar to the results for the PGD symptoms, the most substantial changes on average appeared among those participants in the BF group. However, most likely because of the limited sample sizes, these within group findings were statistically nonsignificant ($ps > .10$). These results are illustrated in Figure 3.

There was a main effect of time on the PHI, demonstrating PHIs from T1 to T3 on average among participants in all groups over time, $F(1, 50) = 91.75, p < .001, \eta_p^2 = .65$ controlling for gender, history of psychotherapy, and current psychotherapy status. On average, participants reported improvements in markers of general physical health functioning three months after the conclusion of the intervention, regardless of condition assignment.

Discussion

This RCT investigated the effects of directing individuals who experienced a significant interpersonal loss to engage in meaning-making, a process theorized to be therapeutically valuable for bereaved individuals, through written disclosure. Two novel sets of instructions were developed based on indications in the meaning-making literature that specific tasks may be clinically useful for individuals adjusting to a significant loss (Davis et al., 1998). We found evidence that writing about one's loss experience was more efficacious in reducing PGD three months postintervention than writing about a neutral topic. The novel BF meaning-making intervention, which directed participants to write about positive consequences related to their loss experience, appeared especially beneficial. Significant treatment effects on depressive and PTSD symptoms also emerged, especially among those randomized to the BF condition at baseline.

Researchers have suggested that the initial stages of coping with a trauma or loss may entail SM, but recovery may ultimately result from deriving benefits and growth from the experience that develop over time (Davis et al., 1998; Janoff-Bulman & McPherson Frantz, 1997; Park & Blumberg, 2002; Tedeschi & Calhoun, 2004). The positive effects we observed with the BF treatment condition may reflect the fact that the majority of participants ($n = 50$; 74%) were at least one year post-loss. It is possible that exercises facilitating SM are more beneficial to those who more recently experienced a loss.

These results also support the assertion that if directed disclosure is helpful for the bereaved to any extent, it may only be when applied to those who self-identify as distressed or are seeking psychological help. Sloan and Marx (2004a) suggested this as an explanation for null effects in a study of written disclosure study among child sex abuse survivors (Batten, Follette, Rasmussen Hall, & Palm, 2002), remarking that not all survivors develop

psychological distress and that the sample in this study was not generally symptomatic. In fact, a study of nonbereaved psychotherapy outpatients found that adding ED homework to psychotherapy treatment resulted in significant reductions in depressive and anxiety symptoms (Graf, Gaudiano, & Geller, 2008).

The current study was distinguished from other bereavement-specific written disclosure investigations, in which effects were not observed (Bower et al., 2003; Range et al., 2000; Stroebe et al., 2002), by our implementation of specific instructions to engage in making meaning of one's loss experience. Without guidance, written disclosure study participants may not have written about topics that typically assist in grief resolution and adjustment (Frattaroli, 2006; Stroebe et al., 2006). Furthermore, traditional nondirected ED instructions have encouraged ventilation of emotions. Stroebe et al. (2006) highlighted that without the inclusion of additional direction, this type of ventilation may result in rumination, which has been associated with poor adjustment to bereavement (Nolen-Hoeksema, 2001; Nolen-Hoeksema, McBride, & Larson, 1997). Our observation that writing focusing on BF was particularly efficacious is supported by prior psychosocial intervention outcome studies in which BF was not only enhanced (Antoni et al., 2001; Ullrich & Lutgendorf, 2002), but was also associated with positive outcomes (Crueess et al., 2000; Stanton et al., 2002). These studies did not, however, focus on bereaved individuals, as the current study did. Our finding that directing bereaved individuals to focus on positive consequences related to their loss experience results in reductions in psychological symptoms above and beyond the effects of time in a generally nondistressed sample demonstrates the promise of this approach.

Future studies may examine how other types of direction or writing focus would result in treatment effects. For example, bereavement researchers have been giving increased attention to the role of insecure attachment style, a risk factor for PGD (Shear & Shair, 2005; Vanderwerker, Jacobs, Parkes, & Prigerson, 2006), in moderating treatment effects and have suggested that writing instructions might focus on resolving issues related to the loss and attachment style (Prigerson et al., 2008; Stroebe et al., 2006). In addition, stronger effects may be observed if a stronger dose of the treatment is used than the standard three to four writing sessions administered in this and prior studies. Wagner, Knaevelsrud, and Maercker (2006) found that 10 writing sessions administered over the Internet reduced complicated grief symptoms; however, complicated grief symptoms were assessed using a measure of intrusions and avoidance symptoms. The impact of writing on separation distress was not clear. In addition, a psychotherapist personally tailored the essays for each participant and responded used cognitive-behavioral techniques (Wagner et al., 2006).

Bereavement researchers have suggested that interventions may only be efficacious for individuals exhibiting or at risk for pathological grief reactions (Jordan & Neimeyer, 2003; Schut et al., 2001). The current study sample was generally not very distressed. Only one participant actually met the criteria for PGD according to the previous diagnostic algorithm. In fact, results showed that, on average, PGD, depressive, and PTSD symptoms decreased over time in all groups. Such changes likely reflect the alleviation of normal bereavement-related distress that is expected to occur with the passage of time (Stroebe et al., 2006; Stroebe et al., 2002; Stroebe et al., 2005). Bereavement-specific expressive writing may have the greatest impact in clinical populations (Neimeyer et al., 2008), as there are important confounding factors that might account for these results. Future studies might advertise more broadly and implement more stringent screening using the current proposed diagnostic criteria for PGD to test the efficacy of written disclosure in a clinical population that is seeking help. However, given that this intervention has not been firmly established as a therapeutic modality, care should be taken in monitoring study participants (Sloan &

Marx, 2004b). Because expressive writing is primarily “hands off” intervention, investigators should be particularly attentive to the needs of severely distressed individuals.

Limitations

The sample size by T3 was substantially reduced by attrition. In addition, participants were primarily healthy bereaved undergraduates who did not report a great deal of PGD symptoms or distress. This population was selected for several reasons. First, samples of written disclosure studies that have demonstrated positive outcomes frequently consisted of healthy undergraduates (Smyth, 1998), and thus testing novel writing conditions in a sample with similar demographics reduces additional confounds. Second, meta-analyses of written disclosure trials have suggested that effects are larger in trials with healthy individuals than with clinical populations (Frattaroli, 2006; Frisina, Borod, & Lepore, 2004; Smyth, 1998). Third, bereaved individuals may be particularly vulnerable, and thus recruiting healthy college students limited the risk of unintentional harm resulting from the examination of the novel interventions (Stroebe, Stroebe, & Schut, 2003). Additional support for the use of this population emerged after the inception of the study, as the only investigations that have examined and demonstrated associations between lower PGD symptoms and increased SM and BF as they are defined in the current study used healthy undergraduate samples (Currier et al., 2006).

Conclusion

Researchers have previously recommended that studies target clinical populations exhibiting or at high risk for pathological grief reactions to determine if this might explain null findings in prior bereavement-specific writing studies (Bower et al., 2003; Range et al., 2000; Stroebe et al., 2002; Stroebe et al., 2006; Stroebe et al., 2005). To our knowledge, this is the first RCT that assessed symptoms of PGD in an effort to address this frequent suggestion. However, the sample recruited was generally nondistressed. Given that prior and current psychotherapy status was associated with our outcome measures (and hence controlled for in all statistical analyses) perhaps supports the argument that high-risk or help-seeking populations may be targeted for written disclosure grief interventions.

In addition to reductions in PGD, depressive, and PTSD symptoms, we found that directed meaning-making interventions were perceived as more helpful than nondirected writing and may be particularly useful in facilitating bereaved individuals in finding positive meaning in their loss experience. These findings suggest that such techniques will be perceived positively by participants and may thus be appropriate for investigation in a more vulnerable population.

Written disclosure appears to have several strengths, including being cost-effective and easily disseminated, which may explain why researchers have continued to conduct studies of bereavement-specific written disclosure despite trials repeatedly demonstrating null effects. The current study suggests the promise of written disclosure for bereaved individuals when the writing is focused on processes associated with adjustment to bereavement.

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FIGURE 1. Study flowchart. *Note:* T1 = baseline assessment; T2 = postintervention assessment; T3 = follow-up assessment; ED = emotional disclosure; BF = benefit-finding; SM = sense-making; and CC = control condition.

Emotional Disclosure (ED) Writing Instructions
 For the next 20 minutes, we would like you to write about the most significant interpersonal loss you have experienced in your life. Specifically, we'd like you to really let go and explore the full extent of your very deepest emotions, feelings, and thoughts. You might tie your topic to your relationships with others, including parents, lovers, friends, or relatives, to your past, your present, or your future, or to who you have been, who you would like to be, or who you are now. You may write about the same general issues or experiences on all days of writing or about different topics each day. All of your writing will be completely confidential. Don't worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up. Please do not go back through your essay to edit it. If you run out of things to say, either just repeat yourself or try to get more detailed.

Sense-Making (SM) Writing Instructions
 For the next 20 minutes, we would like you to write about the most significant interpersonal loss you have experienced in your life. Specifically, we would like you to focus on really making sense of the loss you experienced. When faced with loss, many individuals try to find meaning in it. One way of finding meaning is by making sense of an event. Sense-making involves answering your own questions about how and why the loss occurred, specifically with respect to the circumstances and causes. We would like you to focus on how the loss fits into your beliefs about why things happen. Consider, but do not limit yourself to, causes such as environmental circumstances, health, your own or someone else's behaviors, or a higher force. If you would like to discuss other explanations that help you make sense of the loss, then please do. In your writing, we'd like you to really let go and explore this topic. You may write about the same general issues or experiences on all days of writing or about different topics each day. All of your writing will be completely confidential. Don't worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up. Please do not go back through your essay to edit it. If you run out of things to say, either repeat yourself or try to get more detailed.

Benefit-Finding (BF) Instructions
 For the next 20 minutes, we would like you to write about the most significant interpersonal loss you have experienced in your life. Specifically, we would like you to focus on positive changes that have come about as a result of the loss you experienced. When faced with loss, many individuals try to find meaning in it. One way of finding meaning is by looking for benefits that have come about as a consequence of an otherwise negative event. Benefit-finding involves finding the positive significance of a stressful event, specifically with respect to life goals, values, and purpose. We would like you to think about positive changes that may have resulted from your loss. Consider, but do not limit yourself to, effects on you, your life, your goals, or your relationships that have occurred as a result of the loss, as well as the value or significance of this loss in your life. If you would like to discuss other positive consequences of the loss, then please do. In your writing, we'd like you to really let go and explore this topic. You may write about the same general issues or experiences on all days of writing or about different topics each day. All of your writing will be completely confidential. Don't worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up. Please do not go back through your essay to edit it. If you run out of things to say, either repeat yourself or try to get more detailed.

Control Condition (CC) Writing Instructions
 For the next 20 minutes, we would like you to write in detail about the room in which you are sitting. We would like you to describe this room as precisely as you can. Do not mention your own emotions, feelings, or opinions. Your description of this room should be as objective as possible. You may write similar descriptions on all days of writing or focus on different aspects of the room that you are in each day. All of your writing will be completely confidential. Don't worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up. Please do not go back through your essay to edit it. If you run out of things to say, either repeat yourself or try to get more detailed.

FIGURE 2.
 Written disclosure instructions.

FIGURE 3.

Prolonged grief disorder, depressive, and posttraumatic stress disorder symptoms over time. Top left panel: estimated marginal mean ICG-R-SF scores over time, covarying for current psychotherapy and relationship to deceased, for total sample in top panel ($N = 68$). Group $\times$ Time interaction effect, $p = .009$. Top right panel: estimated marginal mean CES-D scores over time, covarying for current psychotherapy ($n = 68$). Group $\times$ Time interaction effect, $p = .016$. Bottom panel: estimated marginal mean PCL-C scores over time, covarying for current psychotherapy ($n = 68$). Group $\times$ Time interaction effect, $p = .001$. PGD symptoms measured with Inventory of Complicated Grief-Revised-Short Form. Depressive symptoms measure with Center for Epidemiologic Studies Depression Scale. PTSD symptoms measured with PTSD Checklist-Civilian Version. ED = emotional disclosure condition; BF = benefit-finding condition; SM = sense-making condition; and CC = control condition.

TABLE 1

Pretreatment Participant Characteristics and Group Differences

Variable	Total sample	Emotional disclosure (ED)	Benefit-finding (BF)	Sense-making (SM)	Control condition (CC)	<i>P</i>
<i>n</i>	68	16	17	19	16	
Age (years)	19.7 (3.5)	19.2 (1.3)	20.4 (5.1)	20.0 (4.3)	19.3 (0.7)	.68
Gender (<i>n</i>)						.51
Female	36	7	9	11	9	
Male	32	9	8	8	7	
Education (years)	13.9 (1.1)	13.8 (1.0)	13.8 (1.0)	14.0 (1.0)	14.1(1.8)	.90
History of psychotherapy (%)	32.4%	18.8%	41.2%	26.3%	43.8%	.39
Current psychotherapy (%)	5.9%	6.3%	5.9%	0.0%	12.5%	.85
Time since loss (years)	3.9 (4.2)	4.1 (4.5)	4.0 (4.2)	3.4 (6.4)	2.5 (1.9)	.58
Relationship of lost individual (<i>n</i>)						.68
1° Relative	21	3	4	8	6	
2° Relative	30	9	8	7	6	
Other relationship	17	4	5	4	4	

Note. *p* values for statistical tests (*F* or χ^2) of differences between all four conditions (ED, BF, SM, CC).

TABLE 2

Summary Information for Outcome Variables

Measure	<u>Emotional disclosure</u>		<u>Benefit-finding</u>		<u>Sense-making</u>		<u>Control condition</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
ICG-R-SF								
T1 (<i>n</i> =68)	31.1	9.4	29.9	9.5	30.5	10.9	31.8	10.2
T2 (<i>n</i> =68)	27.9	9.4	28.6	8.1	28.1	10.5	29.6	10.7
T3 (<i>n</i> =68)	25.8	11.0	24.9	5.7	27.0	10.2	30.5	10.5
CES-D								
T1 (<i>n</i> =68)	15.1	12.0	14.2	13.9	15.5	12.1	17.4	12.0
T2 (<i>n</i> =68)	17.0	12.1	14.8	14.0	13.0	8.3	19.6	10.8
T3 (<i>n</i> =68)	12.6	13.2	11.6	12.9	10.9	7.1	12.9	9.1
PCL-C								
T1 (<i>n</i> =68)	29.1	9.1	27.5	8.6	28.8	8.7	31.6	10.7
T2 (<i>n</i> =68)	28.6	9.3	27.1	12.5	27.2	6.4	32.5	10.7
T3 (<i>n</i> =68)	25.2	10.6	24.7	10.5	25.9	6.5	26.6	8.3
PHI								
T1 (<i>n</i> =68)	183.5	78.8	204.0	92.8	199.4	75.0	248.6	65.1
T3 (<i>n</i> =68)	111.2	40.8	114.9	45.3	121.2	45.1	138.7	49.7

Note. Unadjusted means presented. No statistically significant between-groups differences were found at T2 or T3, adjusting for relevant covariates ($ps > .10$). ICG-R-SF=Inventory of Complicated Grief-Revised-Short Form. CES-D=Center for Epidemiological Studies-Depression Scale. PCL-C=Posttraumatic Stress Checklist-Civilian Version. PHI=Physical Physical Health Index.