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DOES WRITING ABOUT THE BEREAVEMENT LESSEN GRIEF FOLLOWING SUDDEN, UNINTENTIONAL DEATH?

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Writing about traumatic events produces improvement in an array of areas including physical and psychological functioning. To see if these improvements extended to improved bereavement recovery after the accidental or homicidal death of a loved one, 64 undergraduates (51 women, 13 men) began, and 44 completed, a writing project. At pretest, they completed measures of depression, anxiety, grief, impact, and non-routine health visits. Then, they were randomly assigned to write about either the bereavement experience (profound condition), or innocuous topics (trivial condition). They wrote for 15 minutes a day for four days, then completed the same measures a second time (posttest). Six weeks later, they were mailed the same measures again (follow-up). A 2 (Condition: Profound versus Trivial) × 3(Time: Pre-, Post-, or Follow-up) MANOVA yielded a significant main effect for time, but no main effect for condition and no interaction. Follow-up ANOVAs indicated that, across conditions, from pretest to follow-up testing participants reported less anxiety and depression, less impact, greater grief recovery, but about the same health center visits. A 2 (Condition) × 4(Writing Day) MANOVA and follow-up tests indicated that those in the profound condition reported less subjective distress from Day 1 to Day 3, compared to those in the trivial condition. Combined with Kovac and Range (1999), present results suggest that writing projects may be more beneficial to those experiencing the unique bereavement of suicidal death, rather than those experiencing the nonintentional death of a loved one by accident or homicide.

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An experimental writing paradigm has been developed that allows empirical evaluation of a clinical intervention. This writing paradigm involves randomly assigning participants to write about either the events and emotions surrounding a traumatic event (profound condition) or objective, innocuous facts, such as describing their most recent meal or plans after the experiment ends (trivial condition). Typically, studies use a pre-, post-, follow-up test design, and participants write on average for four days for 15–20 minutes per day (Pennebaker, 1989). This paradigm provides a way to test an intervention that clinicians might make in therapy, or that individuals might use spontaneously to help themselves recover from a traumatic or distressing event.

Writing about traumatic events produces improvement in an array of areas after the intervention ends. Improvements in physical health include fewer health center visits (Francis & Pennebaker, 1992; Pennebaker & Beall, 1986; Pennebaker, Colder, & Sharp, 1990; Richards, Pennebaker, & Beal, 1998), improved immune functioning (Esterling, Antoni, Fletcher, Marguiles, & Schneiderman, 1994; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Petrie, Booth, Pennebaker, Davison & Thomas, 1995), and fewer reported physical symptoms (Greenberg & Stone, 1992; Pennebaker & Beall, 1986; Richards et al., 1998). Improvements in overall or psychological functioning include consistent point averages rather than a drop in grades among college freshman (Pennebaker et al., 1990), quicker reemployment for professionals (Spera, Buhrfeind, & Pennebaker, 1994), and lower absentee rates for university employees (Francis & Pennebaker, 1992). Thus, writing improves physical and psychological functioning.

Much of the research simply asks participants to write about their most personal, traumatic, or stressful event, thus the trauma is unspecified. However, the death of a loved one is a prominent theme in many of the participants' writings about traumatic events (Pennebaker, 1989). For example, the percentage of participants choosing to write about bereavement has varied from 13% (Pennebaker et al., 1988) to about 20% (Greenberg, Wortman, & Stone, 1996; Pennebaker & Beall, 1986; Pennebaker, Hughes, & O'Heeron, 1987). When simply told to write about a traumatic event, many respondents spontaneously choose to write about the death of a loved one.

One recommendation arising from writing paradigm studies is that more systematic research is necessary in order to assess if this paradigm is effective with certain populations (Bootzin, 1997). A few research projects utilizing a writing paradigm have addressed this point by screening for specific past traumas (Greenberg et al., 1996; Kovac & Range, 1999; Range & Kovac, 1998). These traumas were specified as one from a list of specific traumas such as rape (Greenberg et al., 1996), or as the suicidal death of a loved one (Kovac & Range, 1999; Range & Kovac, 1998). No one to date assessed whether writing about the events and emotions surrounding the death of a loved one by sudden, unintentional causes would enhance bereavement recovery.

Sudden, unintentional bereavement may be especially appropriate for a writing paradigm for several reasons. One, the sudden nature of the death may mean that bereaved individuals receive unhelpful social support (Lehman, Ellard, & Wortman, 1986). Indeed, 62% of bereaved individuals who lost a child or spouse in a car accident reported that some individuals said or did something that was unhelpful, such as giving simplistic advice, blithely encouraging recovery from the loss, and making rude remarks (Lehman et al., 1986). Also, some bereaved individuals become detached from their families because of difficulty accepting an unanticipated death (Reed, 1993). Thus, participants in writing studies who write about the loss of their loved one from sudden, unintentional death may feel that the death was traumatic or stressful because they experienced unhelpful comments or because they felt psychologically distant from those trying to help.

Also, individuals who lost a loved one from a sudden nonintentional death report more physical health problems than individuals who lost a loved one from an anticipated death (Sanders, 1982). For example, 70% of the individuals bereaved by sudden death reported some specific illness 18 months after the death compared to 33% and 46% of the individuals bereaved by long-term and short-term chronic illness, respectively (Sanders, 1982). Many of the writing paradigm studies have reported improvements in physical health among participants in the profound condition. Thus, the physical health benefits of writing may be especially appropriate for persons bereaved from sudden nonintentional death.

Another rationale for why unintentional bereavement may be appropriate for the writing paradigm is that bereavement from sudden, nonintentional death is longer and more intense than bereavement from anticipated deaths (Lehman, Wortman, & Williams, 1987), and often leaves bereaved loved ones feeling angry, guilty, and shocked (Sanders, 1982). Thus, even though the death may have occurred several years previously, respondents in writing paradigm studies frequently choose bereavement when asked to write about a traumatic or stressful event in their lives, because the bereavement was especially difficult, because they got little social support, and because the event continues to have an adverse impact on their physical health.

The present study compared the impact of profound and trivial writing assignments on the bereavement experience following sudden, nonintentional death. For those in the profound condition, similar to other writing paradigm studies (Smyth, 1998), we expected more negative emotions and mood at post testing, because initial negative impact has been reported in some of the writing studies (Pennebaker & Beall, 1986), though not others (Francis & Pennebaker, 1992). For those in the profound condition, we also expected more positive mood, more bereavement recovery, and fewer health center visits at follow-up, than those in the trivial condition.

Method

Participants

Participants initially included 64 volunteers (51 women, 13 men) from undergraduate courses at a midsized southeastern university who received extra credit. In terms of ethnicity, 41 were European-American, 22 were African-American, 1 was Asian-American. The mean age was 20.31 ($SD = 2.73$), and the mean year in college was 2.25 (beginning of sophomore year). A total of 55 participants were single, 7 were married, and 2 were divorced.

Participants reported being quite close to the deceased ($M = 1.91$ on a scale from 1 = very close/upset to 5 = not close/upset) and very upset ($M = 1.44$) by the death. Participants reported that their deceased loved one was an average of 24.25 years old at the time of death.

A total of 10 respondents dropped out prior to the posttest (6 women, 4 men), and another 10 failed to complete follow-up measures. Therefore, there were 44 remaining at the follow-up stage. Of the 20 total noncompleters, 10 were from the profound condition and 10 were from the trivial condition. See Table 1. Independent t tests compared pretest measures and demographic variables of participants who completed pre-, post-, and follow-up (completers) and those who failed to complete either post- or follow-up testing (noncompleters). Only one significant difference occurred: noncompleters were bereaved more recently ($M = 9.75$ months, $SD = 6.34$) than completers ($M = 16.18$ months, $SD = 9.35$). Thus, completers and noncompleters were roughly equivalent on how close they felt to the loved one and how upset they were by the death.

Although participants were randomly assigned to the trivial or profound condition, independent t tests were conducted on pretest measures and demographic variables. The analyses revealed only one significant demographic difference at pretest between the profound and trivial condition. Participants in the profound condition reported that the death of their loved one was more recent ($M = 11.23$ months, $SD = 7.92$) compared to participants in the trivial condition ($M = 16.76$, $SD = 9.18$), $t(62) = 2.56$, $p = .013$.

TABLE 1 Means (and Standard Deviations) for Demographic Variables at Pretest

	Profound $n = 30$	Trivial $n = 34$
Age of participant	20.73 (3.04)	19.94 (2.41)
Year in college	2.37 (1.13)	2.15 (1.02)
Age of deceased	23.80 (11.10)	24.65 (13.56)
How close to deceased	1.97 (0.72)	1.85 (0.78)
How upset by death	1.33 (0.55)	1.53 (0.75)
Months since death	11.23 (7.92)	16.76 (9.18)

Instruments

Screening Form. Completed by approximately 2400 undergraduates, this form asked some demographic questions, e.g., whether the participant had experienced the loss of a loved one within the past two or five years, and if so, the cause of the loved one's death. Finally, participants reported the age of the deceased, how close they felt to the deceased, and how upset they were by the death. Those who met the criteria for inclusion were bereaved within the past 2.5 years due to an accident or homicide, mildly to extremely close to the deceased, and upset by the death. Anyone not interested in participating simply completed no form or returned a blank form.

Demographic Measure. Completed at pretest, this measure asked demographic questions, closeness and upsetness, and the number of nonroutine visits to the health clinic or physician in the past two months.

Multiple Affect Adjective Checklist-Revised, State Form (MAACL-R; Zuckerman & Lubin, 1985). This form consists of 132 adjectives that respondents check if the adjectives describe how they feel "Now-Today." The MAACL-R contains five subscales: (Anxiety, Depression, Hostility, Positive Affect, and Sensation Seeking); and two summary subscales: Dysphoria (Anxiety, Depression, and Hostility) and PASS (Positive Affect and Sensation Seeking). The MAACL-R is internally reliable, with alphas for all seven subscales ranging from .74 to .94, and significant interitem correlations (Lubin et al., 1986). Further, test-retest reliabilities were significant for the state form of PASS and Depression subscales, for time intervals ranging from two to five days (Lubin et al., 1986). Evidence of validity is found in significant correlations between the subscales and other mood state measures (Lubin et al., 1986; Lubin, Cain, & Van Whitlock, 1992).

Self-Rating Depression Scale (SDS; Zung, 1965). This scale consists of 20 depression symptoms, half positive (I still enjoy the things I used to), and half negative (I have crying spells or feel like it), on a 4-point Likert scale (1 = none or a little of the time, 4 = most of the time). Positive items are counterbalanced, so that

higher index scores indicate more depression (Zung, 1965). Reliability is strong, with high alphas (.88 and .93, respectively) and high item-total correlations ($r = .82$ and .85, respectively) for depressed and nondepressed respondents (Gabrys & Peters, 1985). Evidence of discriminant validity is significant differences between depressed and non-depressed groups (Gabrys & Peters, 1985).

Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). This scale consists of 15 items designed to measure the stress involved in a specific life event—in this case accidental or homicidal bereavement. Participants rate items describing their reactions to the death, such as, "I thought about it when I didn't mean to" on a 4-point Likert scale (0 = not at all, 1 = rarely, 3 = sometimes, 5 = often). Items are summed to yield a total score, with high scores indicating more impact and subjective stress. The IES has two subscales: avoidance and intrusion. Evidence of reliability is found in moderate internal consistency (alphas: intrusion = .78; avoidance = .82), and strong test-retest reliability over 1 week ($r = .87$; Horowitz et al., 1979). Evidence of validity is found in the scale's ability to detect change in bereavement and to differentiate between different populations who were experiencing similar life events (Zilberg, Weiss, & Horowitz, 1982).

Grief Recovery Questions (GRQ; Lehman et al., 1986; Lehman et al., 1987). These questions consist of eight items measuring self perceptions of general grief. Three questions are in a "yes/no" format ("Have you ever asked yourself 'why me?' of 'why my friend/relative?'"), and five are on a 9-point Likert scale (1 = not at all, 9 = a great deal) (e.g., "Have you ever felt the death was not real or had not happened?"). Lower scores indicate more general grief recovery. The GRQ, or variations of it, have been used in other research on bereavement (Silverman, Range, & Overholser, 1994; Smith, Range, & Ulmer, 1991–92; Ulmer, Range, & Smith, 1991). However, in the present study it was internally inconsistent (alpha = .41).

Grief Experience Questionnaire (GEQ; Barrett & Scott, 1989). This questionnaire contains 55 items designed to distinguish suicidal and other forms of bereavement. It was originally designed to refer to a spouse's suicide. In the present study therefore 20 items were slight-

ly modified so that "loved one" was substituted for "spouse." Responses are on a 5-point Likert scale (1 = never, 5 = almost always) and are based on how frequently participants experience various aspects of grief (e.g., "Feel deserted by your loved one"). Total scores can range from 55 to 180, with higher scores indicating more severe grief. The GEQ contains 11 subscales for which internal consistency ratings are strong to moderate (.97 to .76) (Barrett & Scott, 1989). Internal consistency for the present study was moderate (alpha = .89). The Somatic Reactions and General Grief Reaction subscales are common grief reactions experienced by individuals bereaved from all types of death, whereas the other nine subscales are reactions especially common to individuals bereaved from suicidal death (Barrett & Scott, 1989).

Essay Evaluation Form. This form, used each of the four writing days, consisted of eight questions (how much their essays were personal, meaningful, severe, revealing of emotions, and still affecting their lives; and, how much they talked to others, wanted to talk to others, and actively held back from talking to others about the essays) on a 7-point Likert scale (1 = not at all, 7 = a great deal). These types of daily evaluations have been used in other writing studies (Greenberg & Stone, 1992; Pennebaker & Beall, 1986).

Subjective Unit of Disturbance Scale (SUDS; Wolpe, 1969). This scale, also used each writing day, asked participants to rate their level of anxiety (0 = absolutely calm, 100 = worst anxiety ever experienced).

Experiment Follow-up Form. This form, used at posttest, contained a variety of questions in different formats. Three 7-point Likert ratings (1 = not at all, 7 = a great deal) asked how much participants (a) thought about the study since it ended, (b) talked to others about the study since it ended, and (c) valued the study for themselves. A yes/no question asked whether or not they sought counseling/therapy since the study ended. A fill-in-the-blank question asked how many times they visited the health center or family doctor other than for routine check ups. Open-ended questions asked about (a) their relationship to the deceased loved one, (b) whether anything in the news/media or their personal lives affected their answers, (c) their speculations about the purpose of the study

and when this purpose occurred to them, and (d) any additional comments.

Procedure

After screening in undergraduate courses, potential participants who met criteria were contacted by telephone. In that conversation, the experimenter confirmed the information on the Screening Form, requested their participation, informed them about the appointment schedule and requirements of the study, and reiterated that the study was voluntary and that they would receive extra credit for each day of participation.

At the first meeting, Experimenter #1 met with each participant to reconfirm the information discussed over the telephone. Then, Experimenter #1 gave guidelines to consenting participants to develop a 4-digit code, stored separately in a secure location, to be used by the supervisor only in the event that their essays contained any suicidal or homicidal intent (none did so). Then, Experimenter #1 gave each participant a list of local counseling services in case she or he needed it during the study. Experimenter #1 met participants at the beginning at each session to ensure that the writing was going well, but requested that they refrain from discussing the topic of the writing.

Experimenter #1 then escorted the participant to a small lab room to meet with Experimenter #2, who gave participants the Demographic Form and randomly assigned them to either the profound or trivial condition. Participants then completed the MAACL-R, SDS, IES, GRQ, and GEQ anonymously, using only their personal code. Experimenter #2 then gave each participant a blank tablet and read them the instructions. Participants in the profound group received the following instructions:

> For the next 15 minutes, I would like you to write about the events and emotions surrounding the loss of your loved one. If possible, the events surrounding the bereavement should be ones that you have not widely discussed with others. During the writing session, I want you to really explore your deepest emotions and thoughts surrounding the death of your loved one. The only rule that I ask of you is to write continuously for the entire 15 minutes. If you run out of things to say, either repeat yourself or try to get more detailed. In your writing, please do not worry about spelling,

> grammar, or sentence structure. Instead I want you to focus on all of your thoughts and emotions surrounding your loved one's death.

The instructions for the trivial group varied because the trivial topics changed each time. An example of the trivial group instruction is:

> For the next 15 minutes, I would like you to describe your bedroom or dorm room in detail. I want you to describe this room as precisely as you can. Do not mention your own emotions, feelings, or opinions. Your description should be as objective as possible. The only rule that I ask of you is to write continuously for the entire 15 minutes. If you run out of things to say, either repeat yourself or try to get more detailed. In your writing, please do not worry about spelling, grammar, or sentence structure. Instead I want you to focus on describing your bedroom or dorm room as precisely as possible.

In both conditions, Experimenter #2 left the instructions on the table in case participants needed to refer to them and closed the door. After 15 minutes, Experimenter #2 knocked on the door, and gave participants the Essay Evaluation Form. Participants placed all their essays in a box outside the writing room, and gave the Essay Evaluation Forms to Experimenter #2.

On the following days the same procedure was followed. On Day 4, after completing the writing and Evaluation Forms, participants completed the same measures previously completed (MAACL-R, SDS, IES, GRQ, and GEQ). Participants received extra credit at the end of each writing day (4 total).

Participants were then debriefed by Experimenter #1, who told them that different groups wrote about different topics and that there might be different outcomes on the questionnaires. Participants also were asked for a 6-week mailing address to send the follow-up forms, and a permanent address to send a one-page summary of the results. Experimenter #1 also asked for questions and comments, and thanked them for their time.

Finally, six weeks from their last writing session, participants were mailed the follow up measures: MAACL-R, SDS, IES, GRQ, GEQ, and the Follow-up Form. A cover letter again thanked them and asked to return completed questionnaires either by mail or in person. Extra-credit was offered at this step. Reminder postcards were mailed two weeks later.

Results

One-way ANOVAs were conducted on the essay evaluation forms as a manipulation check. Compared to participants in the trivial condition, those in the profound condition rated their essays as more personal, meaningful, emotional, and severe. Also, compared to those in the trivial condition, those in the profound condition reported that they wanted to talk to other people more about their essays, actually talked to other people about their essays, and held back more from talking to others about their essay topics. Also, compared to those in the trivial condition, those in the profound condition were more likely to feel that the topic was still affecting their lives. See Table 2 for means, standard deviations, F values, and significance levels.

A 2 (Condition: Profound versus Trivial) × 3 (Time: Pre-, Post-, Follow-up) between-within repeated measures MANOVA on the SDS, IES, GRQ, GEQ, and the subscales of the MAACL-R yielded one significant main effect, for time, $F(18,22) = 4.80$,

TABLE 2 Means and *SD*s for SUDS and Essay Evaluations Averaged Across Four Writing Days

	Trivial $n = 24$		Profound $n = 20$			
Items	*M*	*SD*	*M*	*SD*	$F(1,42)$	p
Essay Ratings						
Personal	2.94*	1.47	5.90*	1.04	57.23	.001
Meaningful	2.84*	1.64	6.30*	.89	70.92	.001
Revealing of emotions	2.06*	1.28	5.80*	1.01	112.50	.001
Severe	1.93*	1.28	5.39*	1.15	86.75	.001
Wanted to talk to others	2.05*	1.19	4.80*	1.32	53.02	.001
Actually talked to others	2.20*	.94	3.59*	1.52	13.68	.001
Held back from talking to others	1.97*	1.26	4.41*	1.60		
Still affecting your life	2.64*	1.81	4.74*	1.58	11.28	.002
SUDS	41.34**	21.75	25.87**	28.47	4.60 3.50[a]	.007 .024

Note. SUDS ratings ranged from 0 to 100; 0 = absolute calm, 100 = worst anxiety ever experienced. For the SUDS ratings, Trivial $n = 26$, Profound $n = 19$. On essay ratings, 1 = not at all, 7 = a great deal.

* $p < .01$, ** $p < .05$, [a] Day 1 > Day 3.

TABLE 3 Means and Standard Deviations at Pretest, Posttest, and Follow-up

GROUPS	PROFOUND			TRIVIAL					
MAACL	Pre	Post	Follow-up	Pre	Post	Follow-up	$F(2,38)$	p	Time difference
Anxiety	1.85 (2.25)	1.65 (2.16)	1.00 (1.56)	1.71 (1.90)	1.43 (2.01)	0.81 (1.29)	5.35	.009	Pre > F
Depress	1.60 (2.64)	1.20 (2.02)	0.45 (0.94)	1.05 (1.72)	1.00 (1.61)	0.52 (0.81)	4.66	.016	Pre > F
Hostility	1.65 (2.74)	1.05 (1.57)	0.60 (1.14)	2.24 (3.13)	0.86 (1.28)	0.90 (2.10)	ns		
Pos. Affect	8.50 (7.10)	8.30 (6.59)	10.60 (6.57)	8.05 (6.28)	10.19 (7.01)	9.95 (6.74)	ns		
Sensation	4.35 (1.87)	4.35 (2.25)	5.55 (2.61)	5.62 (2.09)	5.24 (2.55)	6.14 (3.66)	ns		
Dysphoria	5.10 (7.01)	3.90 (5.42)	2.05 (2.82)	5.00 (5.70)	3.29 (4.12)	2.24 (2.77)	ns		
PASS	2.85 (8.52)	12.65 (7.89)	16.15 (7.60)	13.67 (6.76)	15.43 (8.33)	16.10 (7.85)	ns		
SDS	0.50 (0.08)	0.48 (0.10)	0.47 (0.09)	0.50 (0.11)	0.46 (0.11)	0.43 (0.11)	9.55	.001	Pre > Post, Pre > F
IMPACT	33.70 (19.74)	24.55 (17.27)	18.25 (17.36)	32.48 (18.40)	22.74 (18.79)	17.43 (17.72)	16.45	.001	Pre > Post, Pre > F
Intrus	17.45 (11.28)	12.65 (10.44)	9.75 (9.18)	16.52 (10.39)	11.65 (10.72)	9.35 (9.67)	15.31	.001	Pre > Post, Pre > F
Avoid	16.25 (10.19)	11.95 (8.15)	8.50 (9.27)	15.96 (9.92)	11.26 (9.71)	8.09 (8.83)	11.73	.001	Pre > Post, Pre > F
GRQ	38.55 (11.43)	35.40 (13.20)	33.50 (17.22)	32.91 (13.99)	29.35 (16.84)	27.78 (14.10)	4.33	.02	Pre > F
Health	0.25 (0.64)	—	0.45 (1.39)	0.38 (0.65)	—	0.67 (1.40)	ns		
Thought	—	3.70* (1.66)	—	—	3.37* (1.35)	ns			
Discussed	—	3.20* (1.67)	—	—	2.83* (1.81)	ns			
Value	—	5.50* (1.24)	—	—	4.33* (2.06)				

Note. PASS = Positive Affect + Sensation Seeking. * Scales: 1 = not at all, 7 = a great deal.

$p = .001$. The main effects for condition and the interaction were not significant.

Following up this significance, five of nine 2 (Condition) × 3 (Time: Pre-, Post-, Follow-up) ANOVAs were significant. First, on the MAACL-R, state anxiety, and state depression decreased from pre- to follow-up test (Tukey's HSD). Second, on the SDS, depression declined from pre- to posttest and from pre- to follow-up test. Third, on the IES, overall impact of the grief declined from pre- to posttest and from pretest to follow-up testing. Follow-up testing on the IES subscales yielded significant time effects for both avoidance, and intrusion, both of which decreased from pre- to posttest and from pre- to follow-up test. Fourth, on the GRQ, grief recovery improved from pre- to follow-up test. See Table 3 for means, standard deviations, and F and significance levels. Fifth, on the GEQ, overall grief diminished from pre to post- to follow-up test. See Table 4 for means, standard deviations, F and significance levels on the GEQ.

Follow-up ANOVAs on the GEQ subscales yielded significant differences on 6 of 11 subscales. First, somatic complaints declined from pre- to follow-up test. Second, general grief declined from pre- to posttest and from pre- to follow-up test. Third, searching for an explanation declined from pre- to follow-up test and from post- to follow-up. Fourth, stigmatization diminished from pre- to posttest and from pre- to follow-up test. Fifth, guilt declined from pre- to posttest, post- to follow-up test, and pre- to follow-up test. Sixth, unique reactions to the grief declined from pre- to follow-up test. See Table 4 for means, standard deviations, and F and significance levels.

An ANOVA on health center visits yielded no significant main effects and no significant interaction. See Table 3.

To assess the daily impact of the writing instructions, a 2 (Condition) × 4 (Day) ANOVA on the SUDS yielded a significant interaction. Paired sample t tests revealed significantly lower anxiety for the profound condition between Day 1 and Day 2, $t(16) = 3.37$, $p = .004$, and Day 2 and Day 3, $t(16) = 2.35$, $p = .032$, whereas the trivial condition stayed about the same. The ANOVA on the SUDS also yielded a significant time effect, $F(3,41) = 3.50$, $p = .024$. All participants reported less discomfort from Day 1 to Day 3. See Table 2.

TABLE 4 Means and Standard Deviations for the GEQ Total and Subscales

	Profound			Trivial					
	Pre	Post	Follow-up	Pre	Post	Follow-up	$F(2,38)$	p	Time difference
Total	105.60 (30.57)	96.50 (31.25)	90.55 (31.08)	97.83 (33.68)	87.26 (29.26)	78.39 (27.80)	14.22	.001	Pre > Post > F
Somatic	9.45 (3.72)	8.35 (3.42)	8.60 (4.01)	9.70 (4.30)	8.87 (3.55)	7.83 (4.03)	3.49	.041	Pre > F
General	9.80 (4.38)	9.30 (4.26)	8.70 (4.39)	10.52 (5.54)	8.26 (4.39)	7.09 (3.40)	11.42	.001	Pre > Post, Pre > F
Explain	16.00 (3.68)	14.90 (4.52)	12.65 (6.47)	14.57 (6.31)	12.87 (5.46)	10.78 (5.30)	9.01	.001	Pre > Post Post > F
LSS	7.30 (3.11)	6.70 (2.66)	6.60 (2.76)	7.83 (3.87)	6.87 (3.51)	6.65 (3.72)	ns		
Stigma	7.95 (3.44)	6.85 (2.68)	7.35 (3.50)	8.09 (4.63)	7.09 (3.67)	6.43 (3.74)	7.93	.001	Pre > Post Pre > F
Guilt	14.40 (6.57)	11.70 (5.94)	9.90 (4.79)	11.96 (5.57)	9.22 (4.70)	7.70 (4.38)	15.95	.001	Pre > Post > F
RES	8.10 (3.49)	7.65 (4.36)	7.10 (4.14)	5.96 (1.89)	5.96 (1.36)	5.43 (1.34)	ns		
Shame	8.75 (3.42)	9.25 (3.84)	8.15 (2.85)	9.00 (4.25)	8.39 (4.72)	7.78 (4.75)	ns		
REJ	7.90 (4.73)	6.90 (2.94)	6.85 (3.25)	5.35 (0.93)	5.22 (0.60)	5.13 (0.63)	ns		
SDB	6.80 (1.85)	6.70 (2.58)	6.60 (1.85)	6.74 (2.40)	6.57 (2.02)	6.30 (2.49)	ns		
Unique	9.10 (3.24)	8.20 (3.46)	8.10 (3.42)	8.13 (3.51)	7.96 (3.13)	7.00 (2.63)	4.06	.025	Pre > F

Note. LSS = Loss of Social Support, RES = Responsibility, REJ = Rejection, SDB = Self-Destructive Behavior.

Participants were not significantly different in how much they had thought about the experiment and how much they had discussed the experiment with other individuals since it ended. However, compared to those in the trivial condition, those in the profound condition rated the overall value of the experiment higher ($M = 4.33$, "neutral," versus 5.50, "moderately positive," for trivial versus profound, respectively), $F(1,42) = 4.96$, $p = .03$ (see Table 3).

Discussion

Present results indicate that, across both interventions, participants who experienced the accidental or homicidal death of a loved one within the past 2.5 years reported less grief, less anxiety, and less depression over the course of the two months they were involved in the current study. Unexpectedly, all participants experienced improvement in most outcome measures, regardless of writing condition. Time, rather than writing about their bereavement experience, apparently facilitated recovery from the unintentional death of their loved one.

Writing about their bereavement experience however, did reduce self-reported anxiety, which significantly declined for those in the profound condition compared to those in the trivial condition from the first day of writing to the third day. Note, no significant interaction effect occurred on the anxiety subscale of the MAACL-R. One explanation for this inconsistency involves timing. Participants completed SUDS ratings immediately after writing each day, whereas they completed the MAACL-R before writing, after writing on the last day, and at six-week follow-up. The SUDS measure may reflect more state anxiety, whereas the MAACL-R is more long term trait anxiety.

Also unexpectedly, writing about the unintentional death had no effect on grief. There are several possible explanations for these findings. First, the Grief Recovery Questions (GRQ) were adapted from interviews conducted with parents who lost a child in a car accident, but the internal consistency of the scale at pretest was

weak $r = .41$). Although widely used in bereavement research (Lehman et al., 1986; Lehman et al., 1987; Ulmer, et al., 1991–92), the GRQ was an unreliable measure for the present sample. Second, the Grief Experience Questionnaire discriminates between suicidal grief and other types of grief (Barrett & Scott, 1989) and was specifically designed to assess suicidal grief. So, it may have been inappropriate for measuring nonsuicidal grief. Supporting this hypothesis is that, in other research, participants who wrote about the loss of their loved one by suicide had significantly less grief as measured by this instrument as opposed to those participants who wrote about trivial topics (Kovac & Range, 1999). Measures specifically designed to measure grief from sudden, nonintentional death would have been more appropriate to the present study.

Unlike other aspects of bereavement, health center visits were not affected by the writing paradigm. Average nonroutine health visits over the two months were: profound = .25 at pretest and .45 at follow-up; trivial = .38 at pretest and 1.54 at follow-up. Although this difference in means was large, the variability was also quite high, so that statistical tests were not significant. Overall, participants in the profound condition reported about the same number of nonroutine visits to the health clinic as those in the trivial condition. This finding is inconsistent with some previous research. In other writing projects participants reported fewer health center visits in the profound condition as opposed to the trivial condition (Pennebaker et al., 1990; Richards et al., 1998). However, others reported no difference in health center visits between the two conditions (Donnely & Murray, 1991; Greenberg & Stone, 1992). More advanced measures assessing physical health exist, such as immune functioning (Esterling et al., 1994; Pennebaker et al., 1988), or health clinic reports of number of nonroutine visits. In future research, we recommend supplementing self-report with other physical health measures.

One limitation of the present project was the unexpected demographic difference between participants in the profound and trivial conditions on how long ago their loved one died. For those in the profound condition, their loved one died slightly less than one year earlier. For those in the trivial condition, their loved one died about a year and four months earlier. This pre-existing difference

could have meant that the writing had differential impact because of how long ago the event occurred. On a related note, noncompleters were more recently bereaved than completers. Both these factors may have affected results in ways that are unknown.

Another limitation was that all participants were college students and most were women. Future research should make stronger efforts to include both men and women as participants and clinical populations to increase generalizability.

Still another limitation was the assumption that the unintentional death was the most traumatic event participants experienced. Future research could ask participants to rate the bereavement compared to other traumatic events in their lives, or select only those participants reporting traumatic bereavement.

Finally, a potential limitation was the instructions given to the control group. Although instructions were similar to those in other writing paradigms, in this situation the trivial instructions may actually have had an impact on participants. For example, first being prompted to attend to one's grief through filling out several questionnaires about it and the loved one's death, then being instructed to focus on concrete details of one's present life, may have helped people refocus or obtain a sense of mastery, thus having a positive impact on their recovery. An alternative paradigm might be to use random assignment to profound and trivial conditions, but no pretesting.

Despite these limitations, present results clearly document the fact that writing one's innermost thoughts and feelings about a recent homicidal or accidental bereavement was engaging and perhaps troubling, as evidenced by ratings of the essays and of the experiment as a whole. Therefore, the writing paradigm appears to be a valuable experience for the participants.

Present results, combined with Kovac and Range (1999), suggest that a writing paradigm may be more beneficial to those whose loved one died of suicide than from other sudden deaths. Perhaps the unique features of suicidal grief are especially ameliorated by writing.

Present results highlight relevant issues for future research. Specifically, measures should precisely coincide with the participants' traumatic experience. Further, future research using the writing paradigm with bereaved participants should expand to include

heterogeneous populations, such as participants in a support group for grief or clients in an outpatient community health center.

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