

RESEARCH ON TRAUMA

A Comparison of Positive Versus Negative Emotional Expression in a Written Disclosure Study Among Distressed Students

DANIEL L. SEGAL, HEATHER C. TUCKER,
and FREDERICK L. COOLIDGE

University of Colorado at Colorado Springs, Colorado Springs, Colorado, USA

This study investigated the effects of expressing through writing either positive feelings, negative feelings, or both about an upsetting event in order to assess which mode of expression facilitated greater emotional and cognitive processing. Undergraduate student participants with self-reported unresolved upsetting experiences were randomly assigned to one of three writing groups. After completing three writing sessions, they were evaluated at baseline, postexperimentally, and at 1-month follow-up. All groups experienced positive benefits; however, participants in the positive writing group showed greater adaptive cognitive changes than the other groups. Thus it appears that the written expression of positive feelings is as therapeutic as the written expression of negative emotions, which may prompt increased cognitive reorganization or benefit finding among a nonclinical sample.

KEYWORDS catharsis, emotional expression, positive emotions, benefit finding

Based on Pennebaker's influential program of research over the past 2 decades on the effects of emotional disclosure (e.g., Pennebaker, 1989,

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Address correspondence to Daniel L. Segal, Department of Psychology, University of Colorado at Colorado Springs, 1420 Austin Bluffs Parkway, Colorado Springs, Colorado 80933-7150, USA. E-mail: dsegal@uccs.edu

1997; Pennebaker, Kiecolt-Glaser, & Glaser, 1988), a large body of literature has indicated that the written expression of one's deepest emotions and thoughts about diverse types of distressing experiences has meaningful beneficial effects on mental and physical functioning for a variety of populations (Esterling, L'Abate, Murray, & Pennebaker, 1999; Frisina, Borod, & Lepore, 2004; Greenberg, Wortman, & Stone, 1996; Hunt, Schloss, Moonat, Poulos, & Wieland, 2007; Lepore & Smyth, 2002; Mosher & Danoff-Burg, 2006; Segal & Murray, 2001; Smyth, 1998). Although the mechanisms of change are not fully understood, several theories have been offered. Pennebaker, Mayne, and Francis (1997) hypothesized that as thoughts and feelings become linguistically organized, structured, and labeled during the expression or disclosure process, the imposed structure upon the event facilitates assimilation and understanding of the experience, which allows individuals to cope better. Sloan and colleagues (e.g., Sloan & Marx, 2004; Sloan, Marx, & Epstein, 2005) suggested that exposure to painful memories that were previously avoided is an important part of the process, although cognitive assimilation is also expected to occur during the course of successful exposure.

These theories, however, seem predicated on the notion that it is primarily the expression or experience of *negative* feelings that is required. Indeed, the expression of deep, powerful, and often intensely painful feelings has been linked with the process of psychotherapy since its modern origins traceable to Sigmund Freud's seminal work (e.g., Breuer & Freud, 1895/1966). However, little empirical data are available to clarify whether positive or negative emotional expression, or both, is needed for maximal therapeutic resolution of upsetting events.

Stanton et al. (2002) randomly assigned breast cancer patients to either a written emotional disclosure condition, a benefit-finding condition (in which participants were asked to focus on their positive thoughts and feelings regarding their experience with breast cancer), or a control group in which they wrote about the facts of their breast cancer. The written emotional expression group and the benefit-finding group both resulted in health benefits relative to controls, but the positive disclosure group was most effective for women high in avoidance. In a related study, McCullough, Root, and Cohen (2006) found that among participants who had experienced an interpersonal transgression, those assigned to write about the benefits of the experience engaged in greater cognitive processing than those assigned to write about the upsetting aspects of the transgression or those in a control group who wrote about a trivial topic. Finally, King and Miner (2000) found that writing about the perceived benefits of traumatic experiences had the same physical health benefits as writing about the negative aspects of the trauma, although psychological outcomes were not evaluated in their study.

Thus there is some experimental evidence that having individuals write about the positive aspects and express positive feelings regarding a distressing situation may produce therapeutic effects. The recent literature on posttraumatic growth (e.g., Tedeschi & Calhoun, 2004) has also suggested that some individuals who undergo serious ordeals are able to benefit psychologically from the experience and derive some meaning from it. The purpose of the present study was to experimentally investigate the psychological effects of expressing positive feelings about an emotionally distressing event by comparing positive expression to the expression of negative feelings and to the expression of both positive and negative feelings. We hoped to assess which mode of expression facilitated greater emotional and cognitive processing.

METHOD

Participants

Initially a brief prescreening questionnaire was given to 826 undergraduate psychology students to identify potential participants for the study who were presently distressed about an upsetting experience. Specifically, this questionnaire asked participants the following:

Have you experienced a traumatic or very upsetting event that still bothers you? This does not mean any unpleasant event, but rather an event that you experienced as traumatic at the time it occurred, no matter how long ago. Only answer *yes* if the event or experience still bothers or troubles you sometimes.

Overall, 452 (55%) prescreened participants indicated they had experienced a disturbing event that still bothered them. Of these, 364 (81%) indicated on the prescreening questionnaire that they were willing to participate in a study in which they would be asked to write about the experience in depth over several sessions. Out of the pool of potential participants who met the criteria of being presently distressed and willing to participate in the study, the research team began contacting potential participants one at a time to invite them to participate in the full study. When the goal was reached of having 90 participants who completed the study, no further recruiting was done.

Participants (mean age = 24.0 years; $SD = 8.2$ years; age range = 17–53 years; 81% Caucasian; 30 males and 60 females) were randomly assigned by gender to the positive prompt, negative prompt, or standard prompt group to ensure an equal number of males ($n = 10$) and females ($n = 20$) in each group. At 1-month follow-up, 74 participants remained in the study (16 dropped out). The three groups were not significantly different as to dropout frequency, Cramer's $V = .15$, $p = .37$.

Outcome Measures

IMPACT OF EVENT SCALE

The Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979) consists of 15 self-report items that assess current subjective distress related to a specific upsetting event. The items are answered on a 6-point scale (0 = *not at all*, 1 = *rarely*, 3 = *sometimes*, 5 = *often*). The IES yields intrusion and avoidance subscales, which are summed to produce a total distress score. Possible score ranges are 0 to 75 on the total distress score, with higher scores indicating increased distress. The IES has excellent psychometric properties, is widely used in trauma research, and has been used successfully in emotional processing studies (e.g., Guinther, Segal, & Bogaards, 2003; Segal, Bogaards, Becker, & Chatman, 1999; Segal, Chatman, Bogaards, & Becker, 2001). Coefficient alpha for the IES total score (at baseline) in this study was .88.

POSTEXPERIMENTAL QUESTIONNAIRE

The postexperimental questionnaire (PEQ) is an eight-item self-report measure in which participants are asked to rate changes that have occurred as a result of the procedures of the study. Items on the PEQ focus on positive and negative feelings about the topic and the self, changes in thinking and adaptive behavior, and feelings of resolution about the topic. These questions are shown in Table 1 and were answered on a 7-point scale (1 = *none*, 4 = *somewhat*, 7 = *very much*). The PEQ has proved to be a sensitive measure of change in previous emotional processing studies (Murray & Segal, 1994; Segal & Murray, 1994).

Process Measures

CONTENT RATINGS OF THE WRITTEN ESSAYS

The content analysis system used in previous studies (Murray & Segal, 1994; Segal & Murray, 1994) was applied to the written essays in each group. A 7-point scale (1 = *none*, 4 = *somewhat*, 7 = *very much*) was used to evaluate four variables: (a) the expression of positive emotion, (b) the expression of negative emotion, (c) evidence of general adaptive cognitive change (e.g., participant discusses alternative explanations; participant shows a deeper understanding of the problem), and (d) behavioral change toward more adaptive coping strategies (e.g., participant acts more assertive; participant expresses feelings to others). These ratings are shown in Table 2.

Two trained psychology graduate students blind to condition and to the purposes of the study independently rated each essay for each of the three writing sessions for each participant. To check interrater reliability for

TABLE 1 Mean Ratings (SD) of PEQ Items at Postexperiment and 1-Month Follow-Up for Each Group

PEQ items	Postexperiment (N = 90)				1-Month follow-up (N = 74)					
	pos	neg	stand	F	p	pos	neg	stand	F	p
To what extent are your feelings about your topic more positive than when you started this experiment?	4.3	3.5 (1.9)	3.8 (1.6)	1.84 (1.8)	<.165	4.1	3.6 (1.9)	3.8 (1.8)	.55 (1.6)	<.580
To what extent are your feelings about your topic more negative than when you started this experiment?	2.3	2.3 (1.7)	2.0 (1.6)	.42 (1.6)	<.657	1.8	1.8 (1.4)	1.9 (1.5)	.09 (1.5)	<.919
To what extent do you feel better about yourself as a result of this experiment?	4.0	3.6 (1.8)	3.4 (1.8)	.90 (1.9)	<.410	3.9	3.7 (1.9)	3.3 (1.7)	.67 (1.6)	<.513
To what extent do you feel worse about yourself as a result of this experiment?	1.9	1.8 (1.3)	1.6 (1.2)	.60 (1.2)	<.551	1.7	1.3 (1.2)	1.4 (0.8)	1.07 (0.8)	<.348
Has this experiment led you to think about your topic in any different ways, for example, having a deeper understanding of the problem or viewing the problem in a more adaptive way?	4.8 _a	3.6 _b (1.9)	3.4 _b (1.8)	5.54 (1.6)	<.005	4.2	3.8 (1.5)	3.8 (1.3)	.69 (1.6)	<.504
How much differently have you acted (behaved) since you began the writing sessions compared to usual?	2.2	2.3 (1.2)	2.2 (1.3)	.12 (1.5)	<.891	2.3	2.3 (1.3)	2.2 (1.6)	.09 (1.4)	<.907
To what extent do you feel a sense of resolution regarding your topic?	4.0 _{ab}	3.1 _a (1.8)	4.2 _b (1.5)	3.40 (1.9)	<.038	4.2	3.9 (1.9)	4.3 (1.6)	.26 (1.6)	<.771
To what extent have you come to accept your feelings about your topic?	4.8	4.8 (1.8)	5.4 (1.7)	1.49 (1.7)	<.231	5.2	5.3 (1.6)	5.3 (1.3)	.14 (1.2)	<.873

Note. Means with different subscripts differ significantly at $p < .05$ by Tukey's HSD test. pos = positive prompt; neg = negative prompt; stand = standard prompt. Scale anchors: 1 = no change, 4 = somewhat, 7 = much change.

TABLE 2 Mean Ratings (SD) of Content Analysis Items for Each Group

Content analysis items	Means			<i>F</i>	<i>p</i>	Effect size
	Positive prompt	Negative prompt	Standard prompt			
To what extent was positive emotion expressed about a stressful event?	30.4 _a (6.6)	17.7 _b (3.8)	23.2 _c (4.2)	48.20	<.0005	.52
To what extent was negative emotion expressed about a stressful event?	20.7 _a (6.6)	30.4 _b (4.5)	25.7 _c (4.7)	24.16	<.0005	.35
To what extent did the material show cognitive changes about the event, such as a deeper understanding of the problem or reviewing the problem in a more adaptive way?	31.3 _a (6.3)	20.3 _b (4.4)	25.2 _c (4.0)	27.43	<.0005	.38
To what extent did the material indicate problem solving or adaptive behavior?	30.7 _a (5.9)	21.0 _b (4.2)	25.5 _c (4.3)	38.39	<.0005	.46

Note. Means with different subscripts differ significantly at $p < .05$ by Tukey's HSD test. Effect size is η^2 .

each of the four rated variables, simple correlations between raters were calculated. A composite reliability coefficient for each rated variable was computed by averaging the correlations for each variable over the three writing sessions. These average coefficients were (a) positive emotion ($r = .77$), (b) negative emotion ($r = .75$), (c) cognitive change ($r = .65$), and (d) adaptive behavioral change ($r = .68$). All were significant ($p < .01$), and these values are similar to those in previous reliability checks (Murray & Segal, 1994; Segal & Murray, 1994).

POSITIVE AND NEGATIVE AFFECT SCHEDULE

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is a self-report scale used to assess changes in self-reported mood from beginning to end of each session and from session to session. It comprises two mood scales labeled Positive Affect and Negative Affect. Higher scores indicate greater levels of emotion experienced at present. Four depression items were added to the PANAS due to a deficit in this area, and a previous factor analysis confirmed that the added items loaded on the negative factor as expected (Segal & Murray, 1994). Thus the final measure included 10 positive and 14 negative items answered on a 5-point scale (1 = *very slightly*, 3 = *moderately*, 5 = *extremely*). Each scale is highly internally consistent, the two are largely uncorrelated, and the measure has been shown to be sensitive to fluctuations in mood (Watson et al., 1988). For this study, coefficient alphas were .87 for positive affect and .93 for negative affect.

Procedure

After prescreening and invitation to participate, participants were randomly assigned to groups by gender. Participants completed three 20-minute writing sessions (modified from Pennebaker's disclosure paradigm; Pennebaker et al., 1988). Participants in the *standard* prompt condition were given the following instructions orally and in writing:

During each of the 3 days, I want you to write about one of the most traumatic and upsetting experiences of your life. This is the event you indicated on the prescreening questionnaire. The important thing about this is that you write about your deepest thoughts and feelings. Please use the entire 20 minutes. If you finish before the time is over, you can think through the event again and describe certain aspects of it more deeply. You will be left alone in this room (modified from Pennebaker et al., 1988).

Participants in the *negative* prompt group were given a similar prompt, but were told to disclose their deepest negative feelings and thoughts and stay away from positive feelings and thoughts about the event. In contrast, participants in the *positive* prompt group were instructed to disclose their deepest positive feelings and thoughts and ignore negative feelings and thoughts. Participants were reminded at each subsequent writing session to write about the same event that they wrote about in the first session.

The PANAS was completed immediately before and immediately after each writing session. The IES was completed preexperimentally, postexperimentally, and at 1-month follow-up, whereas the PEQ was completed postexperimentally and at 1-month follow-up. The second session occurred 2 to 3 days after the first session and the third session occurred 2 to 3 days after the second session so that all 3 sessions were completed within 1 week.

RESULTS

Equivalency of Groups and Nature of the Essays

To examine the equivalency of the three experimental groups at baseline, a series of one-way analyses of variance (ANOVAs) showed that there were no significant differences between the positive prompt, negative prompt, and standard prompt groups on the following variables: (a) age, $F(2, 89) = 1.19$, $p = .31$, (b) IES total, $F(2, 89) = .36$, $p = .70$, (c) PANAS negative affect, $F(2, 89) = .23$, $p = .79$, and (d) PANAS positive affect, $F(2, 89) = .20$, $p = .82$, thus indicating equivalency of groups. Although participants in this study were relatively healthy college students, for the vast majority, the experiences that they described in the essays were poignant, serious, and

powerful. The most common themes of upsetting and stressful experiences included the following: (a) divorce of parents (24%), (b) breakup of a serious relationship (24%), (c) death of a close relative or friend (29%), (d) being a victim of a serious personal physical attack (e.g., mugging, assault, or rape; 15%), and (e) academic failures (8%).

Treatment Check via Content Analysis

To assess the effectiveness of the manipulation and support the validity of the experimental groups in the ratings of the amount of positive and negative emotional expression revealed in the essays, content analysis results were examined. Ratings from both raters were summed and combined for all analyses. For the expression of positive emotions, ANOVA showed a significant main effect for Group, $F(2, 89) = 48.20, p < .0005$, with a large effect size ($\eta^2 = .52$). Tukey's honestly significant difference (HSD) test revealed that the positive prompt ($M = 30.4$) was significantly higher than the standard prompt ($M = 23.2$), which was significantly higher than the negative prompt group ($M = 17.7$). For the expression of negative emotions, there was a significant main effect for Group, $F(2, 89) = 24.16, p < .0005$, with a large effect size ($\eta^2 = .35$). Tukey's test revealed that the negative prompt ($M = 30.4$) was significantly higher than the standard prompt group ($M = 25.7$), which was significantly higher than the positive prompt group ($M = 20.7$). Thus the treatment check was supported and the manipulation appeared to be successful.

Outcome Effects

The hypothesis that participants in all groups would show positive effects as measured by the IES was supported. Whereas the Group (positive vs. negative vs. standard prompt) \times Time (preexperiment vs. postexperiment vs. follow-up) interaction effect was not significant, $F(4, 140) = .97, p = .42$, indicating that the treatment group did not affect the amount of change in IES scores, the main effect for Time was significant, $F(2, 140) = 37.71, p < .0005$. Pairwise comparisons revealed that IES total scores significantly decreased from preexperiment ($M = 33.2$) to postexperiment ($M = 27.8$), and further significantly decreased at 1-month follow-up ($M = 20.0$). Overall, there was a 40% decrease in mean IES total scores from baseline (preexperiment) to follow-up.

On the PEQ, one-way ANOVAs were performed on each item at postexperiment and at 1-month follow-up (see Table 1). Significant group differences at postexperiment occurred for Item 5 (regarding adaptive cognitive changes), $F(2, 89) = 5.54, p < .01$, with a medium to large effect size ($\eta^2 = .11$) and Item 7 (regarding a sense of resolution), $F(2, 89) = 3.40, p < .05$, with a small to medium effect size ($\eta^2 = .07$). For Item 5, the positive

prompt group ($M = 4.8$) was significantly higher than both the negative prompt group ($M = 3.6$) and the standard prompt group ($M = 3.4$). For Item 7, the standard prompt group ($M = 4.2$) was significantly higher than the negative prompt group ($M = 3.1$), but the positive prompt group ($M = 4.0$) did not differ from the others. At follow-up, no group differences were found.

Content Analysis of Sessions

Content analysis results were used to examine what actually happened during the writing sessions. To explore group differences, a series of one-way ANOVAs was conducted on the content analysis items (see Table 2). As mentioned previously, significant group differences were found as part of the manipulation check for positive emotion and negative emotion in the expected directions and with large effect sizes. Significant group differences also emerged for adaptive cognitive change, $F(2, 89) = 27.43$, $p < .0005$, with a large effect size ($\eta^2 = .38$), and adaptive behavioral change, $F(2, 89) = 38.39$, $p < .0005$, with a large effect size ($\eta^2 = .46$). Follow-up tests using Tukey's HSD test revealed that for the cognitive change item, all groups were significantly different from each other, with the positive prompt group being rated higher ($M = 31.3$) than the standard prompt group ($M = 25.2$), which was rated as higher than the negative prompt group ($M = 20.3$). A similar pattern emerged for the adaptive behavioral change item, with all groups significantly different from each other and the positive prompt showing the best outcome (positive prompt $M = 30.7$, standard prompt $M = 25.5$, negative prompt $M = 21.0$).

Overall, the content analysis results revealed significant group differences in the expressed content of the written sessions. Specifically, the positive prompt group was rated as expressing more positive emotions, fewer negative emotions, and higher levels of cognitive change and adaptive behavioral change. The negative prompt group was rated as expressing fewer positive emotions, more negative emotions, and lower levels of cognitive change and adaptive behavioral change than the other groups.

Mood Changes During Treatments

Results for emotional changes (PANAS negative affect) were analyzed by a Group \times Pre/Post (pre-session vs. post-session) \times Days (Day 1 vs. Day 2 vs. Day 3) ANOVA. Significant main effects occurred for Pre/Post, $F(1, 87) = 23.08$, $p < .0005$, and Days, $F(2, 84) = 63.74$, $p < .0005$. The Group \times Pre/Post interaction was significant, $F(2, 87) = 7.48$, $p < .001$, but the Group \times Days interaction was nonsignificant, $F(4, 76) = 1.49$, $p = .22$. Results showed a steady decrease in negative affect across days in that each day differed significantly from another (Day 1, $M = 30.1$; Day 2, $M = 23.4$; Day 3,

$M = 22.1$). Overall, there was a 27% decrease in negative affect scores from Day 1 to Day 3. The significant Group \times Pre/Post interaction was examined with pairwise comparisons showing that the negative prompt and standard prompt groups both significantly increased in negative affect from pre-session (negative prompt, $M = 24.0$; standard prompt, $M = 23.1$) to postsession (negative prompt, $M = 30.1$; standard prompt, $M = 25.1$). In contrast, the positive prompt group did not significantly change from pre-session ($M = 24.2$) to postsession ($M = 24.7$).

Regarding PANAS positive affect, a similar 3 (Group) \times 2 (Pre/Post) \times 3 (Days) repeated measures ANOVA was performed. Only one effect emerged, which was a significant main effect for Pre/Post, $F(1, 87) = 15.83$, $p < .0005$, indicating that positive affect significantly decreased from pre-session ($M = 26.8$) to postsession ($M = 25.0$). The main effect for Days was not significant, $F(2, 84) = .10$, $p = .89$ (Day 1, $M = 25.9$; Day 2, $M = 26.1$; Day 3, $M = 25.7$), and the Group \times Pre/Post, $F(2, 87) = .43$, $p = .65$, Group \times Days, $F(4, 76) = .09$, $p = .98$, and Group \times Pre/Post \times Days, $F(4, 76) = .54$, $p = .71$, interaction effects were all nonsignificant. Thus changes in positive affect were minimal, with the exception of an overall decline from pre-session to postsession, which was similar in the three groups.

DISCUSSION

The present study appears to indicate that the written expression of positive emotions is at least as therapeutic as the written expression of negative feelings. Indeed, all groups experienced significant positive benefits and showed evidence of emotional processing as indicated by reductions in subjective distress (IES) and negative affect (PANAS). Also, PEQ results suggest that overall, participants felt moderately more positive about their topic, moderately better about themselves, thought about their topic in somewhat different and more adaptive ways, and felt a moderate sense of resolution and acceptance about their topic.

There were some potentially important differences between groups, however, in the ability of participants to show increased understanding, insight, and cognitive reorganization regarding their distressing experiences. Most notably, participants in the positive prompt reported greater adaptive cognitive changes than the other groups (PEQ), and they also were rated as showing higher levels of cognitive change and greater adaptive coping behaviors (content analysis). These findings are consistent with those reported by McCullough et al. (2006) and King and Miner (2000), who also found positive effects among students who wrote about the benefits of upsetting experiences. The results are also consistent with Folkman's (2008) revised stress and coping model in which the adaptive and restorative functions of positive emotion are highlighted.

One difference in process was found in the measure of negative affect from pre- to postsession. Negative affect increased from pre- to postsession for the negative and standard prompt groups, but the positive prompt group evidenced no difference in negative affect from pre- to postsession. Although cognitive and emotional processing seemed to be occurring in the positive prompt group, it appears that participants in the positive group did not experience the immediate unpleasant emotional toll of the writing process as was seen in the other groups. This perhaps made the process more palatable along the way for the positive group.

Theoretical Implications

Our finding that the expression of positive feelings was at least as beneficial to participants as the expression of negative feelings provides further evidence that there are likely multiple underlying factors that may account for the beneficial effects of written emotional expression. Thus a focus on positive emotions may be one such factor in this particular population of distressed students. Because the positive group showed somewhat greater adaptive changes in their beliefs about the upsetting event than the other two conditions (from both the PEQ findings and the content analysis), one might argue that benefit finding, cognitive reorganization, and changes in the meaning of the narrative about the upsetting event were possible mechanisms of change in this population. This is consistent with the hypothesis suggested by Pennebaker et al. (1997).

Our results are also consistent with those from Langens and Schüler (2007), who suggested that the written disclosure process results in therapeutic positive affect regulation expectancies. Specifically, they suggested that an active ingredient of the written emotional expression process is that it induces positive expectancies in the writers that the writing will improve their emotional health. This positive expectation then actually leads to improvements in well-being. Although we did not evaluate positive expectancies directly, it is possible that the focus on positive emotions increased positive expectancies, an idea that should be examined empirically in future studies. Further dismantling studies of written emotional expression (e.g., Hunt et al., 2007) are also warranted.

The findings from the present study may also be viewed through the lens of Frederickson's (2001) broaden-and-build theory, which predicts that positive emotions broaden the scope of attention and cognition, assisting people to discover novel lines of thinking and behavior. A consequence of these broadened mindsets is the replenishing of the person's social, intellectual, and physical personal resources and the initiation of upward spirals toward emotional well-being (e.g., Burns et al., 2008). Consistent with this theory is the evidence from our study that the enhanced focus on positive emotions did relate to somewhat greater adaptive changes in thinking, at

least in the short-term, among a nonclinical sample with lower-magnitude types of disturbing experiences.

Clinical Implications

First and foremost, because the present study was an analogue study using a nonclinical sample of students with a relatively narrow range of upsetting experiences, the clinical implications must be limited to similar samples. That caveat stated, as trainers of clinicians, we have observed that some beginning clinicians are bemused and puzzled about how to respond during a clinical interview or psychotherapy session when a client expresses positive feelings. Indeed, examples of how to train clinicians to develop rapport with clients and respond to them with empathy typically emphasize reactions to negative emotions. We do not quibble with the value of attending to negative feelings expressed by clients, but we would argue that the understanding and reflection of positive feelings is important as well. This point has also been emphasized by proponents of emotion-focused psychotherapy approaches (see Greenberg, 2002; Greenberg & Pascual-Leone, 2006).

During training, we emphasize the importance for clinicians to reflect all types of feelings (negative, positive, or mixed, to the extent they are experienced or expressed by clients) and in all directions (toward others, toward the client, and toward the clinician). The results from our study further suggest that when positive emotions are elicited from distressed individuals with modest forms of stress reactions, therapeutic benefits may emerge as they have opportunities to discover new ways of thinking about their experiences and potentially find benefits.

Several limitations of the present study should be noted. First, this study included a self-selected, nonclinical student population. It is likely that the more avoidant or distressed participants in the larger prescreening sample might not have agreed to participate in the full study. Second, this reliance on students likely influenced the types of upsetting experiences that were included in the study and limited the inclusion of experiences that were very old or catastrophic (e.g., war trauma). By design, this was not a study of participants with diagnosable posttraumatic stress disorder (PTSD), and thus the type of intervention described in the present study is most likely useful for lower-magnitude stressful events rather than more severe types of trauma usually associated with cases of PTSD. Thus questions about generalizability of the findings to clinical samples could reasonably be raised.

Indeed, researchers should extend this type of study to determine if the effects apply to diverse types of clinical samples. In fact, there is some emerging evidence that written emotional expression interventions of this sort do have some applicability to more serious trauma cases. Resick et al.

(2008) compared the effectiveness of the full protocol for cognitive processing therapy with the cognitive-therapy-only aspect and the written-accounts-only (written emotional expression) aspect of the treatment among women with PTSD. They found that patients in all three treatments improved substantially on PTSD, depression, anxiety, anger, guilt, shame, and cognitive distortions. The cognitive-therapy-only aspect was more effective than the written accounts aspect on the two measures of PTSD and depression that were available throughout the course of treatment and follow-up.

Finally, it should be noted that although the experimental manipulation was effective, it was not possible to ensure that participants in the positive group experienced and expressed only positive feelings and that participants in the negative group experienced and expressed only negative feelings. Even though they largely focused on the types of experiences prompted by the manipulation, there was some degree of negative affect in the positive prompt group and some degree of positive affect in the negative prompt group. This suggests the likelihood that focused writing about one aspect of an emotional experience typically requires individuals to think about other aspects as well.

These limitations notwithstanding, the present findings suggest that positive emotional expression is at least as effective as negative emotional expression in a nonclinical sample of students with a limited range of self-reported distressing experiences. In fact, a focus on eliciting positive emotions may have some benefits, most notably in helping distressed individuals think about the upsetting event in a more adaptive manner. It appears to us that during writing sessions, the act of thinking about a distressing experience and getting in touch with one's feelings about the experience is therapeutic, regardless of whether the person specifically reexperiences the painful aspects of the incident. We concur with King and Miner's (2000) astute observation that, "It may be that regardless of whether one dwells on the negative or the positive, one must, ultimately, dwell in a concerted fashion to experience the benefits of expressive writing" (p. 228). Focusing on the positive aspects of upsetting, painful, or disconcerting events may be an effective form of therapeutic writing without the emotional costs of focusing on the negative aspects, at least in samples similar to the present sample. Further exploration of the specific benefits of positive emotional expression and the specific contexts in which it is most adaptive is warranted.

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