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Authors	Littrell, Jill
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Expression of Emotion:  
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Jill Littrell

Associate Professor

School of Social Work

Georgia State University

[Littrell@gsu.edu](mailto:Littrell@gsu.edu)

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Author Degrees: MSSW University of Wisconsin; Ph.D. in Clinical Psychology Arizona  
State University; MA in Biology Georgia State University

## Abstract

The idea that clients should be encouraged to express strong emotion regarding the traumas they have suffered is widely assumed. This paper asks whether the empirical literature supports the underlying assumption that emotional expression leads to positive outcomes (better health and dissipation of distress). Studies in which individuals who have been given an opportunity to express emotions about past traumas are compared with subjects placed in appropriate control conditions are reviewed. The empirical literature suggests that eliciting emotion is harmful when it is not associated with reappraisal of past trauma, but helpful when the reappraisal occurs. The following guideline emerges: if trauma is to be revisited, it should be accompanied by reappraisal. Since this is sometimes difficult to engineer, alternative approaches for working with victims of trauma, not involving revisiting the trauma, are offered. Additionally, it is suggested that it can be helpful to identify the nature of the problem arising from the traumatic experience, and then provide therapeutic intervention that addresses the problem.

After a number of recent, highly public, traumatic events, mental health workers have volunteered their services to debrief the people involved and local governments have moved to make such services available, all under the assumption that people needed to talk about it (McNally, Bryant, Ehlers, 2003). A large empirical literature is now available examining two related issues: the efficacy of focusing on distress after trauma and the question of whether recalling past emotional trauma can be helpful. The answers turn out to be interesting. Under the right conditions thinking about ongoing distress or past trauma can be helpful; under the wrong conditions, it has deleterious effects.

Since social workers often deal with individuals in emotional pain, knowing how to approach these individuals in a way that complies with the admonition “first, do no harm” is critical. The purpose of this paper will be to identify the critical components of focusing on trauma or distress that determine whether the process will be helpful or harmful.

### **Freudian Rationale for Catharsis**

Freud (1895; 1910) provided a model of emotional functioning that predicted that the expression of emotion would be useful for the individual under a vast array of conditions. According to Freud, unresolved conflicts and trauma elicit emotion. Emotion, if not discharged through expression, will remain trapped in the body causing problems. This was the explanation for hysterical paralysis exhibited by Anna O. Catharsis, or expressing emotion, was Freud’s antidote for Anna’s distress presumably deriving from emotion locked in the body. Freud’s model provides that if emotions are released through expression then the force of the emotion will be dissipated, related symptoms will disappear, and the deleterious impact on health will be averted.

### **The Necessary Conditions for Realizing**

## Positive Outcomes from Revisiting Trauma

### *The Pennebaker Paradigm Studies*

Working from Freudian assumptions, Pennebaker sought to demonstrate that revisiting trauma by writing about it would be beneficial for health (see Pennebaker, 1990). The first study of this type was published by Pennebaker and Beall (1986). In studies utilizing the Pennebaker paradigm, subjects are requested to focus on feelings about a personally meaningful event. Over the course of several consecutive days they are instructed to write about some distressing events in their lives for approximately twenty minutes. The control group writes about some trivial event. Many studies (over 200) have been published examining the impact of writing about trauma (Frattaroli, 2006). Studies utilizing the Pennebaker, write-about-trauma protocol have provided an opportunity to examine whether benefit can be realized from reawakening emotion about past distress.

Many positive outcomes have been reported for those who write about trauma. Individuals writing about trauma exhibit fewer visits to the student health center, and use fewer sick days from work (Frattaroli, 2006). Studies have also evaluated more objective health outcomes. Some representative studies are reported here, although Frattaroli's meta analysis should be consulted for the full array of findings. Subjects writing about trauma exhibited a better immune response to vaccination for hepatitis B (Petrie, Booth, Pennebaker, Davison, & Thomas, 1995); and exhibited better immunologic viral control over Epstein-Barr virus (Esterling, Antoni, Fletcher, Margulies, Schneiderman, 1994). They improved on measures of white blood cell function (stronger natural killer cell response) after the writing procedure (Christensen et al., 1996). Among the HIV+, those who wrote about trauma witnessed an increased CD4+ count over time (Petrie, Fontanilla, Thomas, Booth, & Pennebaker, 2004).

Among those with asthma or Rheumatoid arthritis, symptom relief was achieved (Smyth, Stone, Hurewitz, & Kaelli, 1999). Breast cancer patients decreased visits to the doctor (Stanton et al., 2002). Migraine headache sufferers exhibited reduced distress (McKenna, 1997 cited by Frattaroli, 2006).

In addition to exhibiting better functioning on health outcome measures, after writing about trauma, there is improvement in social and occupational domains. After writing about trauma, individuals engaged in more discussion with relatives (Kovac & Range, 2002) and laughed more during the week (Pennebaker & Graybeal, 2001). Among those suffering job loss, those who wrote about trauma were quicker to find a new job (Spera, Buhrfeind, & Pennebaker, 1994). Students achieved better grades (Pennebaker & Francis, 1996).

Contrary to the generally beneficial effect of writing about past trauma, the recently bereaved seems to be a group for whom the writing procedure offers limited benefit (Stroebe, Schut, Stroebe, 2005). Stroebe, Schut, and Stroebe (2005) conclude that getting over a loss takes time and that writing does not appear to accelerate the process.

*So why does it work?* In evaluating the many studies employing the Pennebaker procedure, King (2002, p. 119) concludes that it is clear that writing about trauma produces positive effects on health but no one knows why. The initial Freudian rationale for why the procedure is beneficial, i.e., that persons writing about trauma benefit because they are no longer inhibiting, has been ruled out. Writing about trauma had the same salubrious effect on individuals who wrote about a previously discussed trauma as it had on those who wrote about something they had never disclosed (Greenberg & Stone, 1992). Greenberg, Wortman, and Stone (1996) had subjects write about an imaginary trauma as if it had happened to them. These individuals too realized a positive benefit from the writing procedure. Other researchers have

varied the topics that individuals are instructed to write about. People who write essays about their future positive goals evidence subsequent better health (King, 2000) as do those who write about finding a solution to a current problem (Cameron & Nicholls, 1998) or who write about finding benefit in their trauma (King & Miner, 2000). Additionally, health-benefit is achieved by writing about positive as well as traumatic/negative events (Frattaroli, 2006). The many variations on the Pennebaker procedure find that health benefits accrue from writing even when the beneficial effects cannot be explained by the release of suppressed thought and bottled emotional energy.

Researchers have identified those subjects who enjoy the most benefits from the Pennebaker procedure. Individuals who produce essays with more causation words (because, cause, effect), insight words (consider, know), who use more positive words, and/or write in the past tense (Low, Stanton, Danoff-Burg, 2006; Pennebaker, 1993; Pennebaker, Mayne, & Francis, 1996; 1997), realize the most gain from the procedure. Reflecting on these subanalyses, Pennebaker and colleagues (1997) have abandoned the original hypothesis that benefits of writing about trauma are realized because the individual is no longer inhibiting. They have advanced a new hypothesis about why the process is efficacious. Those subjects who benefit from the writing-about-trauma- procedure, seem to have recast the situation or changed their view of the situation. They have a new way of looking at it. They may see themselves expressing emotion and regulating their responses (Lepore, Greenberg, Bruno, & Smyth, 2002). They find a way to think about the trauma so that it loses its sting (Páez, Velasco, & González 1999). Consistent with trauma losing its sting, Páez et al. found that after writing people perceived the trauma as more controllable and exhibited less emotional arousal to the trauma-memory.

*Are there times when writing about trauma increases distress?* The emerging picture is that writing about trauma results in positive outcomes because individuals find an inspirational message in the process. But what about those individuals who merely flash back on trauma without sufficient time to find some beneficial meaning in the trauma? Several investigations using the Pennebaker protocol suggest that flashing back on trauma without reappraising the trauma results in increased distress. Lyubomirsky, Sousa, and Dickerhoff (2006) assigned subjects to thinking about trauma, writing about trauma, or talking into a tape recorder about trauma, versus the control condition of writing about trivia. Those who just thought about trauma, without talking or writing about it, exhibited worse outcomes relative to the control group. On the other hand, the writing and talking groups both shared the usual positive effects. Consistent with the Lyubomirsky et al. study, Páez et al., (1999) found that those individuals who briefly recalled a trauma became more negative in their appraisal of the event, an effect which was especially pronounced among those who were unaccustomed to discussing their feelings.

***Clinical Studies Allowing for Evaluation of Whether Revisiting Painful Emotion Yields a Salubrious Impact***

Given the widespread assumption that expression of emotions is always useful after emotional trauma, it is surprising that few studies are available allowing for evaluation of therapeutic procedures directed toward encouraging expression of emotion (Littrell, 1998). In Ashford, LeCroy, and Lortie's (2001, p. 543) textbook for Human Behavior in the Social Environment, on the topic of bereavement grief, William Worden is cited who advises that the bereaving need to "feel the pain". However, no evidence is reported regarding the impact of "feeling the pain." Knight (2006), publishing in *Social Work*, cites uncontrolled studies of

emotion-eliciting therapies for victims of rape and trauma, suggesting that these approaches are salubrious. Fortunately, in addition to studies using the Pennebaker paradigm, studies evaluating encouraged emotional expression in a variety of populations are accumulating.

Reviews of studies evaluating trauma debriefing (a procedure which encourages discussion of feelings about a trauma) have concluded that trauma debriefing, which typically occurs relatively soon after exposure to trauma, is most usually not helpful and occasionally harmful (Deville, Gist, Cotton, 2006; McNally et al., 2003; Rose & Bisson, 1998). In reviewing the results of trauma debriefing among burn victims, Bisson, Jenkins, Alexander, and Bannister (1997) found increases in PTSD among those involved in debriefing. Prolonged intrusions of trauma-related thoughts were found for those who had received trauma debriefing after automobile accidents (Mayou, Ehlers, & Hobbs, 2000). While some reviews find that trauma debriefing is harmful, null findings are also reported. No differences between those receiving trauma debriefing and those in a control group were found for victims of violent crime (Rose, Brewin, Andrews, & Kirk, 1999).

Reviews of grief/bereavement therapy are also available. Like critical incident debriefing, bereavement therapy generally occurs shortly after the loss in an attempt to accelerate or facilitate the natural process of adjustment. Neimeyer (2000) reports that his analysis of 23 randomized control studies found a positive, but modest effect size. However, there was also evidence that as many as 38% of those involved in bereavement therapy exhibited exacerbation of distress relative to those not involved in bereavement therapy. In reviewing results of interventions encouraging emotional disclosure in the bereaved, Stroebe, Schut, and Stroebe (2005) could find no evidence that these procedures facilitate adjustment. However, Stroebe et

al. indicated that some gain may be realized by those individuals who are still experiencing intense levels of grief long after the loss.

Foy et al. (2000) offer a review of trauma focused therapy for adult victims of childhood sexual abuse. Results suggest that this type of intervention is helpful relative to an untreated control sample. A particularly intriguing study was conducted by Spiegel and Yalom. These researchers randomly assigned adult victims of incest to group therapy in which they talked about the past trauma or to group therapy where individuals talked about current functioning and daily events. In terms of results, the clients in both types of groups realized benefit in decreased depression. Anxiety declined more in the present-focused group, whereas intrusions declined to a greater degree in the talk about the past group. (The findings regarding the comparison between the two treatments were reported at a conference, although not reported in a published article, Bower, 1994; Classen, Koopman, Nevill-Manning, & Spiegel, 2001; Yalom, 1994). The null findings in the Spiegel and Yalom study suggest that while attending to victims of trauma can be helpful, revisiting trauma may not be an essential component in this process.

In contrast to studies evaluating talk-about-past-trauma-in group therapy in an unstructured way are the studies evaluating behavioral exposure, during which trauma is revisited in a very structured fashion. The behavioral therapy studies of exposure techniques for treating Post Traumatic Stress Disorder are among the best executed studies of the impact of revisiting painful experiences. Exposure therapy involves talking into a tape recorder about the details of the rape and then listening to the recording for at least twenty minutes each day for several weeks. Foa and colleagues as well as others (see Resick, Nishith, Weaver, Astin, & Feuer, 2002) have conducted a number of random-assignment controlled studies of exposure therapy for rape victims. Foa, Rothbaum, Rigg, & Murdock, 1991) contrasted revisiting trauma

(exposure therapy) with social support treatment, whereas Foa et al. (1999) contrasted exposure with stress inoculation training. In terms of results, although revisiting the events is initially stress inducing, it eventually becomes less disturbing. Exposure therapy, as contrasted with supportive group therapy, yields particularly good differential impact on decreasing intrusive thoughts. Those women who undergo exposure treatment exhibit a greater decline in intrusive thoughts than those in supportive therapy. However, other symptoms of PTSD (anxiety symptoms, numbing,) are improved with both supportive therapy and exposure therapy (Foa, Rothbaum, Rigg, & Murdock, 1991). Moreover, exposure is superior to stress inoculation training in terms of effect sizes on decreasing PTSD, depression, and anxiety symptoms (Foa et al., 1999).

*Foa's analysis of why exposure works.* In considering the mechanisms through which exposure therapy works, Foa and Kozak (1986) conclude that exposure allows for making a new response to the emotion-eliciting material. Rather than becoming anxious, upset, distressed to rape associated stimuli, the person learns a new set of conditioned autonomic responses (heart rate, blood pressure, etc.). During the exposure session, it takes at least 20 minutes of exposure to recast an autonomic response. If the individual escapes from the emotion eliciting material before his/her arousal subsides no benefit will be realized. The memory has to be recast in terms of elicited response during the therapy session. Moreover, across exposure sessions anxiety must decrease across sessions (Jaycox, Foa, Morral, 1998). Without dissipation of arousal across and within sessions, , the client is resensitized rather than desensitized (Foa & Kozak, 1986; Frueh, Turner, & Beidel, 1995).

Similar to analyses conducted on the subject's narratives in the Pennebaker paradigm studies, Foa and colleagues have analyzed how the narratives of rape victims (among those

instructed to make new narratives in each session) change during the course of exposure treatment. As in the Pennebaker studies, those who benefit from revisiting trauma become less fragmented and more organized in their stories about the trauma (Foa, Molnar, & Cashman, 1995). Furthermore, those undergoing exposure become more positive in their assessment of the world and themselves (Foa & Rauch, 2004). In contrast, individuals exhibiting mental defeat and absence of planning in their narrative, improve less following exposure treatment (Ehlers, Clark, Dunmore, Jaycox, Meadows, & Foa, 1998).

### ***Integration of the Pennebaker Paradigm Studies with Clinical Studies***

In both the Pennebaker paradigm studies and the research on behavioral exposure techniques for trauma victims, the same mechanisms seem to account for the efficacy of revisiting painful emotion. If a person revisits painful emotion and is able to construct some new meaning in the experience or to develop some new physiological response to the emotionally evocative material, then the procedure can result in better health and less psychological distress. Developing a new response, however, does require active reworking and staying with the painful evocative stimuli sufficiently long for autonomic activity to subside. (Frattaroli, 2006, found that studies in which subjects wrote for less than 15 minutes lowered efficacy.) If an individual merely reiterates an old perspective toward evocative material or becomes aroused and then flees the scene before his/her autonomic activity subsides, resensitization to the evocative stimuli and exacerbation of distress is likely to be the result.

Several investigations are consistent with the idea that if trauma-emotion is revisited, the revisitation will only be therapeutic if a new response to the trauma is achieved. Boudewyns and Hyer (1990) assigned Viet Nam vets to watch war films and then recount their war experiences either under conditions which sustained arousal sufficiently long for arousal to eventually

dissipate or exposure conducted in an unsystematic fashion. While the systematic exposure group evidenced better functioning relative to entry level functioning, the unsystematic exposure group deteriorated. Solomon and colleagues have evaluated a type of in-vivo exposure treatment for Veterans of the 1982, Lebanon war. Veterans were involved in military drill complete with artillery fire in an infantry context. Despite having been selected for motivation to “withstand a stay of one month under field conditions”, these individuals were lower on measures of work adaptation and satisfaction with family life after the in-vivo exposure treatment (Bleich, Shalev, Shoham, Solomon, & Kotler, 1992; Solomon et al. 1992). In reflecting upon the lack of efficacy, Solomon noted the program “had focused on successful performance without seeing to it that anxiety was actually extinguished in the presence of aversive stimuli” (p. 244).

The idea that processing trauma will be useful if a new perspective is achieved, but harmful when a new perspective is not achieved is consistent with the data on those who search for meaning. Those HIV+ individuals who search for meaning in the death of a loved one and find it, exhibit extended longevity and higher CD4+ cell counts, but those who search without finding exhibit a greater decline in CD4+ cell counts (Taylor et al., 2000).

A consensus in the literature on the necessity of new perspective finding during emotional exposure is emerging. Greenberg & Safran (1989), exponents for expression of emotion, acknowledge that emotional expression will only be effective in the context of finding a new perspective on stressful events. Salubrious results from emotional expression coupled with finding a new perspective have been reported (Bohart, 1977; Pavio & Greenberg, 1995); however, meta-analyses of expressive-experiential psychotherapies sometimes find evidence of increased deterioration relative to the control group in those induced to merely express emotion (Lilienfeld, 2007). Moreover, reviews of the studies examining interventions evoking emotional

experience reach similar conclusions regarding why these interventions are sometimes effective. All reviews recognize the utility of finding a new perspective on the traumatic material (Greenberg, 2002; Littrell, 1998; Kennedy-Moore & Watson, 2001; Whelton, 2004). Furthermore, Knight (2006) acknowledges that “spilling one’s guts” is not therapeutic, but rather fostering growth should be the goal.

### ***What Are Health Promoting Perspectives on Past Trauma?***

Analysis of the elements of revisiting trauma that account for beneficial results suggest that finding a perspective or new response to the trauma is the critical component. But, what are salubrious perspectives on horror, injustice, and tragedy? The emerging literature on benefit finding in tragedy suggests that finding benefit is associated with less distress (McMillen, 1999). Affirmation of self and personal values can attenuate distress (Creswell, Lam, Stanton, Taylor, Bower, & Sherman, 2007; Creswell, Welch, Taylor, Sherman, Gruenewald, & Mann, 2005). Those individuals who focused on positive emotions (e.g., gratitude, interest, love) after 9/11, experienced less distress (Fredrickson, Tugade, Waugh, Larkin, 2003). Those HIV+ individuals who found meaning in the death of a loved one (appreciating life more and valuing loved ones more) exhibited higher CD4+ cell counts and extended longevity (Taylor, Kemeny, Bower, Gruenewald, & Reed, 2000). Those who can speak about trauma in the past rather than in the present do better (Ehlers & Clark, 2003).

Certainly feeling more confident, empowered, and in control are therapeutic goals about which there might be broad consensus. However, less consensus probably exists on whether perspectives redolent with anger and indignation are helpful responses to injustice. Should victims of injustice embrace a faith in a just-world and focus on the positive aspects of life? Are clients better off remaining vigilant toward the injustices in their world and expending time and

effort to seek revenge? The finding of positive associations between anger and PTSD symptoms imply that anger does not necessarily facilitate finding a productive orientation to trauma (Feeny, Zoellner, & Foa, 2000; Foa, Riggs, Massie, Yarczower, 1995; Riggs, Dancu, Gershung, Greenberg, & Foa, 1992). But, more targeted research on whether anger improves outcome from trauma needs to be done before deriving firm conclusions.

Findings from the Pennebaker studies suggest that those individuals who can find an inspiring perspective as a result of reawakening painful memories do garner health benefits. The operative component is finding the inspiring, uplifting message. This raises questions about how painful memories are revisited in current clinical practice. Knight (2006) reports on the high frequency of vicariously induced Post-traumatic Stress Disorder in therapists who talk with traumatized clients. If the discussion traumatizes the therapist, is the client finding an uplifting message? If clients are directed toward finding an uplifting meaning in reviewing negative events should not both the client and the therapist walk away feeling better if not immediately afterwards then within the week? Certainly, more research is required so that only techniques which will not retraumatize are being practiced.

***Are all clients capable of finding a new response to trauma?***

Interestingly, few of the Pennebaker paradigm studies evaluated the effect of the write about trauma procedure on clinical samples. Whether individuals with clinical depression are capable of finding a positive reframing for traumatic events in their lives remains an open question. Perhaps, troubled individuals will operate more like the subjects in the Lyubomirsky et al. (2006) study who flashed briefly back on their troubling reactions to trauma without recasting and as a result experienced more subsequent distress. In fact, Gidron, Connolly, & Shalev (2002) found that the write-about-trauma procedure exacerbated avoidance symptoms and

increased doctor visits in men suffering from PTSD. Null findings for the efficacy of the write-about-trauma procedure in clinical samples have been reported by others (Frattaroli, 2006).

Beyond failing to benefit from revisiting trauma, the clinically distressed might suffer an exacerbation of symptoms as a result of revisiting trauma. Exacerbation of depression, panic disorder, and alcoholism in those treated with exposure techniques who have diagnoses in addition to PTSD have been noted (Solomon, Gerrity, Muff, 1992; Pitman et al., 1991). Foa and Kozak (1986) advise the exposure not be used with clients exhibiting relatively high levels of arousal initially. Austenfeld and Stanton (2004), generally exponents for emotion approach strategies, question whether such strategies will be beneficial for borderline clients.

Questions, based upon the neuroscience literature, exist about whether all clients are capable of reworking trauma. Quirk (2007) raises the possibility that some individuals will not be able to extinguish fear responses. Consistent with Quirk's concerns are the Pitman and colleague's findings about the brain structure of Viet Nam veterans with PTSD. Pitman and colleagues data argue that those who will develop PTSD have smaller hippocampi even before exposure to trauma. Having a smaller hippocampus probably impairs a person's ability to cope with traumatic material immediately after the trauma and during reexposure (Gilbertson et al., 2002). Thus, careful assessment of those individuals recommended for revisiting trauma interventions should occur.

In addition to the concern that some clients may be incapable of finding a helpful response to trauma stimuli, is the issue of the practicality of exposure therapy. A larger feasibility study of exposure treatment for Viet Nam veterans with Post-Traumatic Stress Disorder delivered on a large scale was conducted by Schnurr et al. (2003) at Veterans Administration Hospitals. The outcomes of current-focus group therapy were contrasted with

outcomes from exposure treatment. Little difference between the two treatments was detected when the analysis included all those assigned to the two treatments (intent to treat analysis). When the analysis was limited to those receiving longer dose of treatment, some finding of better outcome emerged for the exposure treatment. However, in the Schnurr et al. study, more patients dropped out of the exposure treatment. The researchers concluded that exposure therapy may not be practical because of the greater resources (in therapist training) required to deliver the exposure treatment on a large scale.

### **Memory Traces of Conditioned Responses**

#### **Are Never Erased**

A great deal of research has emerged examining the process of extinction in animals who have been fear conditioned. Initial conditioning involves pairing some stimulus (e.g., a light) with shock. In a conditioned animal the light alone will elicit fearful behavior. Extinction involves allowing the animal to be in the presence of the light without the occurrence of the shock. When the animal no longer responds fearfully to the light, extinction has occurred.

Findings from the animal research provide caveats on the fear extinction process. Developing an initial fear response involves connections through the limbic system (input from sensory neurons through the thalamus to the amygdala and then to motor-output-neurons and hypothalamus). Extinguishing a fear response involves inhibition of the limbic-system's neuronal connections by establishing new connections through the animal's cortex. That is, new cortical connections are established that override the old limbic system connections. The limbic system connections are never erased during extinction. Rather, the limbic system connections are just inhibited. An animal whose cortex has been removed cannot extinguish a fear response. Drugs that accelerate the development of new synaptic connections from the cortex facilitate the

extinction process (Ressler et al., 2004). Moreover, if an animal whose fear response has been successfully extinguished, is stressed, the animal's old fears will be reinstated (LeDoux, 1996).

People can be expected to act in the same manner. When individuals undergo a stressful period in their lives, old fears can be expected to reemerge. This does not imply that there was a failure to adequately process or extinguish responses to the original trauma. Once life becomes less stressful and more predictable, the emotional force of previously extinguished fear responses will subside. The cortex will once again be able to combat the limbic system when the limbic system returns to a more subdued state (LeDoux, 1996).

### **Different Treatments Depending on the Needs of the Client**

Social workers do work with individuals who have experienced trauma and abuse. A surprising lesson from 9/11 was the number of rescue workers who did not exhibit PTSD or symptoms of distress (McNally et al., 2003). Similarly, many bereaved individuals (between 33-55% across studies) show resilient patterns exhibiting little loss of function or disabling grief after loss (Bonanno, 2004; 2005). The bottom line: some human beings are quite resilient and do not need clinical attention after trauma or loss. An assumption that everyone who has lived through pain should revisit the past or receive treatment is unwarranted.

While a high percentage of the population can be expected to cope well, some people will exhibit symptoms (e.g., PTSD) after trauma. Clients often come to social workers seeking relief from symptoms of PTSD. The question of which approaches are best at reducing anxiety in those with PTSD arises. Surprisingly, Herman (1992), an exponent of the talk-about-the-trauma approach, advises against talking about the stressful event while the client is still exhibiting intense distress. Ehlers and Clark (2003) concur that treatment should not begin too soon after

initial trauma. But, if one waits until an individual is no longer upset by trauma, is there something to be gained by reawakening the traumas? Naufel and Beike (2004 cited by Frattaroli, 2006) utilizing the Pennebaker paradigm, failed to find a beneficial effect of writing about trauma among those who felt a subjective sense of closure about the traumatic experience. Knight (2006) acknowledges the limited utility of revisiting trauma for those who are functioning well.

As previously reviewed, under the right conditions, exposure techniques can be helpful to victims of trauma. However, sometimes a patient cannot find a new, positive way to think about the traumatic event, or the level of trauma can have been so severe, and the damage so great, that reliving and confronting the events would do more harm than good. Caution is also warranted for individuals who were depressed or anxious even before the trauma. Fortunately, exposure therapy is not the only option.

### ***What Are the Options for Decreasing Symptoms of PTSD Besides Revisiting the Horror?***

Meichenbaum (1994) has been treating PTSD sufferers who have witnessed horror as well as collecting an extensive bibliography on approaches to treating PTSD. He has conducted many workshops during which he has shown tapes of therapy sessions. Many of Meichenbaum's clients witnessed tragic accidents which left the loved one dismembered and deformed immediately prior to the loved one's death. Rather than recounting the details of the horror, Meichenbaum's approach is to spend time with the client recounting the positive, endearing traits of the loved one. Meichenbaum's clients are induced to recast the memory of the loved one from the horror that they witnessed to what was beautiful about the person that lived. Meichenbaum acts as a guide helping clients to find an up-lifting, inspiring message

(Treating Patients with Post Traumatic Stress Disorder, workshop sponsored by Institute for Behavioral Healthcare, Atlanta, GA 3/28/1995).

Lisa Najavits works with substance abusers who exhibit PTSD symptoms. Her approach also directs clients away from reliving and talking about the horror in their trauma. Rather, Najavits focuses clients on safety signals. When clients hyperventilate, she directs them to focus on external stimuli noticing features of the environment. When clients are in less aroused states, she talks with them about identifying places where they will not be endangered and identifying persons with whom they will be safe. Although studies including a control group are limited, empirical investigation supportive of Najavits' approach is accumulating (Najavits, Gallop, & Weiss, 2006; see also [www.seekingsafety.org](http://www.seekingsafety.org) for additional documentation of efficacy).

Another suggestion for working with victims of abuse is to identify the nature of the problems resulting from the abuse/trauma and tailor the treatment to those problems. Adults who were abused as children by their parents do exhibit higher rates of violence toward others (Dodge, Bates, Pettit, 1990). Here, it becomes important to identify what is driving the higher rate of perpetrating abuse. Do formerly abused children become abusers because they have failed to “work through” the trauma? Or have they learned thinking patterns as children which foster aggression? Dodge and colleagues have studied children who were abused. Dodge et al. find that those abused children who become aggressors themselves have learned thinking patterns which are conducive to aggression. These children interpret ambiguous behavior from others as personal challenges indicative of disrespect. Given their interpretations, aggressive behavior is stimulated (Dodge et al., 1990; Dodge, Pettit, Bates, Valente, 1995; Weiss, Dodge, Bates, Pettit, 1992). If the abused children are to be diverted from perpetuating the intergenerational cycle of abuse, these children need to find alternative interpretations for the

behavior of others which won't require aggressive retaliation. Emotional expression is not likely to alter templates for interpreting the behavior of others. Restructuring social cognitions is required. Treatment should be directed toward developing new thinking patterns.

### **The General Issue of How Much Emotion Focus?**

The preceding discussion has examined whether expression of distress in those suffering trauma or loss promotes positive outcomes. Several empirical literatures support the view that expression of distress is useful when accompanied by reappraisal but harmful when a new response is not achieved. The question of whether expression of distress is helpful can be asked for clients in general as well as clients selected for having experienced a trauma or loss.

Nolen-Hoeksema (1990; 2001) explains the differences in rates of depression between the genders as the result of learned strategies for coping with distress. Men rely on distraction and physical activity maintaining an external focus after stressful events. Women maintain an internal focus, express emotion, and ruminate about the distressing event trying to understand their feelings and find an answer. Thus, Nolen-Hoeksema suggests a pernicious effect from attending to distress. Nolen-Hoeksema's concerns are echoed elsewhere in the literature. The literature on those who monitor their internal distress suggests that people who focus attention inwardly exhibit more symptoms (Semler & Harvey, 2004) and are at greater risk for depression and affective disorders (Mathews & MacLeod, 2005).

Though the distress-monitoring literature suggests a downside to internal focusing, the empirical literature on emotional intelligence suggests some utility from being aware of emotional experience. Persons achieving high scores on measures of emotional intelligence attend to their own autonomic activity, respond more empathically to others, and are able to optimize their selection of overt behavioral responses to external events. Additionally, those

with high emotional intelligence, notice increased levels of arousal, use the feedback to stimulate reappraisal strategies, and thereby lower arousal levels (Wranik, Barrett, & Salovey, 2007). For those high on emotional-intelligence, the visceral feedback is used to respond to the external world and invoke regulatory strategies including reappraisal, similar to the strategies observed in Pennebaker write-about-trauma narratives and in the reexposure narratives. But, what about consciously attending to internal feedback for its own sake?

Helen Mayberg's research (Mayberg et al., 2005; Frontiers in Neuroscience lecture at Emory University on April 21, 2007) on area 25 (a region in the subgenual cingulate gyrus) in major depression offers intriguing results. Functional magnetic resonance imaging has suggested that persons with Major Depression exhibit over-activity in area 25. Mayberg inserts an electrode into area 25 and applies inhibiting current to the area. Patients report an immediate relief from distress. However, rather than reporting euphoria, these patients report that "the curtain has lifted", "the fog has cleared". They shift from an internal focus to suddenly noticing things in their environment. They also report a sudden desire to do things. When asked about what he would want to do if he were home (rather than in surgery), one of Mayberg's patients replied that he would want to clean the garage.

If normal functioning involves external focus, perhaps clinicians should be cautious about directing clients who are already depressed or distressed, toward greater internal focus on negative feelings. Perhaps an external focus should be promoted.

### **Should We Be Attending More to Positive Emotions?**

There is a growing literature on the function of positive emotions (joy, interest, contentment, love, laughter). Following a fear inducing event, positive emotions can increase the speed of recovery from an accelerated heart rate brought about by fear engendering

experience. Positive emotions are associated with a broad focus of attention, whereas negative emotions are associated with narrowing focus. One function of positive emotions is to broaden one's focus of attention after a frightening experience or failure experiences, both of which tend to narrow focus. Given a broad focus, reappraisals, novel perspectives, and new behavioral responses are more likely to be generated (Fredrickson, 1998; Fredrickson & Branigan, 2001).

Consistent with a role for positive emotions in recovery from loss are data from Bonnanos' bereaved samples. In discussions with the recently bereaved about their lost loved ones, many individuals exhibited laughter and genuine smiles (Bonanno & Kaltman, 2001; Bonanno & Keltner, 1997). Stein, Folkman, Trabasso, & Richards (1997) found that those who could experience positive emotions during the grieving process generated more plans and goals for the future. Of course, those who could laugh and generate future goals were doing better one year after the loss (Bonanno & Kaltman, 2001; Bonanno & Keltner, 1997; Stein et al., 1997).

Although not much attention is placed on laughter, enjoyment, frivolity in the clinical literature on trauma or loss, perhaps greater attention to positive emotions might accelerate recovery from both trauma and loss.

### **Reflective Listening Is Still Useful**

The discussion heretofore has advocated the strategies of assisting clients to reappraise situations that elicit distress, assisting clients to deploy attention away from internal distress toward external possibilities, and encouraging expression of positive emotion. However, the lessons from reflective listening, that is to acknowledge clients expressed feelings, even negative feelings, are still valid. Social workers should listen, paraphrase, and acknowledge. If they don't clients will feel alienated, misunderstood, and without social support. Parents and caretakers should attend to children's distress because the message in attending is that the child is

important. However, after feelings are acknowledged, the issue of “where to next?” arises. At this point, “reframe”, “refocus”, “rework” strategies may be of benefit. Further rehashing of distress may will exacerbate distress rather than reducing it. It requires good timing and sensitivity, to redirect the client in such a way that he/she still feels acknowledged.

### **Focusing on Emotions in a Group Context**

People do display aggression in response to frustration or attack (Bushman, Baumeister, & Phillips, 2001). This occurs even when aggression serves no apparent function in altering objective circumstances. Data suggest aggression only sometimes results in faster dissipation of arousal after attack and aggression does make subsequent aggression more likely (see review by Littrell, 1998). Puzzling over why people behave aggressively, even when they realize no objective benefit, Bushman et al. (2001) reflect that people do report enjoying their aggressive displays. For other emotions as well, people may enjoy emotional expression. This may explain the popularity of emotionally evocative art forms.

This paper has questioned the utility of expression of painful emotions for expressions own sake. However, the implication that display of emotion is always unhelpful is not being advanced. To the extent that expressing emotions feels good and to the extent that emotional expression fosters social bonds, emotional expression in the context of group therapy could be useful. However, if the clinician wants to avoid intensifying a particular emotion and to the extent that the expressed emotion might discourage social support from others, rather than promoting expression of the emotion, promoting a client’s reappraisals, or promoting a more external focus of attention might be better strategies.

## References

- Ashford, J. B., LeCroy, C. W., & Lortie, K. L. (2001). *Human Behavior in the Social Environment, Second Edition*. Belmont, CA: Brooks/Cole.
- Austenfeld, J. L., & Stanton, A. L. (2004). Coping through emotional approach: A new look at emotion, coping, and health-related outcomes. *Journal of Personality, 72*, 1335-1363.
- Bisson, J., Jenkins, P. L., Alexander, J., & Bannister, C. (1997). Randomized controlled trial of psychological debriefing for victims of burn trauma. *British Journal of Psychiatry, 171*, 78-81.
- Bleich, A., Shalev, A., Shoham, S., Solomon, Z., & Kotler, M. (1992). PTSD: Theoretical and practical considerations as reflected through Koach—An innovative treatment project. *Journal of Traumatic Stress, 5*, 265-271.
- Bohart, A. C. (1977). Role playing and interpersonal-conflict resolution. *Journal of Consulting Psychology, 24*, 15-24.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*, 20-28.
- Bonanno, G. A. (2005). Resilience in the face of potential trauma. *Current Directions in Psychological Science, 14*, 135-138.
- Bonanno, G. A., & Kaltman, S. (1999). Toward an integrative perspective on bereavement. *Psychological Bulletin, 125*, 760-776.
- Bonanno, G. A., & Keltner, S. (1997). Facial expression of emotion and the course of bereavement. *Journal of Abnormal Psychology, 106*, 126-137.

- Boudewyns, P. A., & Hyer, L. (1990). Physiological response to combat memories and preliminary outcome in Vietnam veteran PTSD patients treated with direct therapeutic exposure. *Behavior Therapy, 21*, 63-87.
- Bower, B. (1994). Child sexual abuse: Sensory recall. . . and treating survivors. *Science News, 145*, 365.
- Bushman, B. J., Baumeister, R. F., & Phillips, C. M. (2001). Do people aggress to improve their mood? Catharsis, beliefs, affect regulation opportunity, and aggressive responding. *Journal of Personality and Social Psychology, 81*, 17-32.
- Cameron, L. D., & Nicholls, G. (1998). Expression of stressful experiences through writing: Effects of a self-regulation manipulation for pessimists and optimists. *Health Psychology, 17*, 84-92.
- Christensen, A. J., Edwards, D. L., Wiebe, J. S., Benotsch, E. G., McKelvey, I., Andrews, M., & Lubaroff, D. M. (1996). Effect of verbal self-disclosure on natural killer cell activity: Moderating influence of cynical hostility. *Psychosomatic Medicine, 58*, 150-155.
- Classen, C., Koopman, C., Neville-Manning, K., & Spiegel, D. (2001). A preliminary report comparing trauma-focused and present-focused group therapy against a wait-list condition among childhood sexual abuse survivors with PTSD. *Journal of Aggression, Maltreatment, & Trauma, 4*, 265-288.
- Creswell, J. D., Lam, S., Stanton, A. L., Taylor, S. E., Bower, J. E., & Sherman, D. K. (2007). Does self-affirmation, cognitive processing, or discovery of meaning explain cancer-related health benefits of expressive writing? *Personality and Social Psychology Bulletin, 33*, 238-250.

- Creswell, J. D., Welch, W. T., Taylor, S. E., Sherman, D. K., Gruenewald, T. L., & Mann, T. (2005). Affirmation of personal values buffers neuroendocrine and psychological stress responses. *Psychological Science, 16*, 846-851.
- Devilly, G. J., Gist, R., & Cotton, P. (2006). Ready! Fire! Aim! The status of psychological debriefing and therapeutic interventions: In the work place and after disasters. *Review of General Psychology, 10*, 318-345.
- Dodge, K. A., Pettit, G. S., Bates, J. E., & Valente, E. (1995). Social information processing patterns partially mediate the effect of early physical abuse on later conduct problems. *Journal of Abnormal Psychology, 104*, 632-643.
- Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle violence. *Science, 250*, 1678-1683.
- Ehlers, A., & Clark, D. M. (2003). Early psychological interventions for adult survivors of trauma: A review. *Biological Psychiatry, 53*, 817-826.
- Ehlers, A., Clark, D. M., Dunmore, E., Jaycox, L., Meadows, E., & Foa, E. B. (1998). Predicting response to exposure treatment in PTSD: The role of mental defeat and alienation. *Journal of Traumatic Stress, 11*, 457-471.
- Esterling, B. A., Antoni, M. H., Fletcher, M. A., Margulies, S., & Schneiderman, N. (1994). Emotional disclosure through writing or speaking modulates latent Epstein-Barr virus antibody titers. *Journal of Consulting and Clinical Psychology, 62*, 130-140.
- Feeny, N. C., Zoellner, L. A., & Foa, E. B. (2000). Anger, dissociation, and posttraumatic stress disorder among female assault victims. *Journal of Traumatic Stress, 13*, 89-100.
- Foa, E. B., Dancu, C. V., Hembree, E. A., Jaycox, L. H., Meadows, E. A. & Street, G. P. (1999). A comparison of exposure therapy, stress inoculation training, and their combination in

- reducing posttraumatic stress disorder in female assault victims. *Journal of Consulting and Clinical Psychology, 67*, 194-200.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*, 20-35.
- Foa, E. B., Molnar, C., & Cashman, L. (1995). Change in rape narratives during exposure therapy for post-traumatic-stress-disorder. *Journal of Traumatic Stress, 8*, 675-690.
- Foa, E. B., & Rauch, S. A. M. (2004). Cognitive changes during prolonged exposure versus prolonged exposure plus cognitive restructuring in female assault survivors with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 72*, 879-884.
- Foa, E. B., Riggs, D. S., Massie, E. D., & Yarczower, M. (1995). The impact of fear activation and anger on the efficacy of exposure treatment for post-traumatic-stress-disorder. *Behavior Therapy, 26*, 487-499.
- Foa, E. B., Rothbaum, B. O., Riggs, D. S., & Murdock, T. B. (1991). Treatment of posttraumatic stress disorder in rape victims: A comparison between cognitive-behavioral procedures and counseling. *Journal of Consulting and Clinical Psychology, 59*, 715-723.
- Foy, D. W., Glynn, S. M., Schnurr, P. P., Jankowski, M. K., Wattenberg, M. S., Weiss, D. S., Marmar, C. R., & Gusman, F. D. (2000). Group therapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.) *Effective treatments for PTSD*, pp. 155-175. New York: Guilford Press.
- Frattaroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin, 132*, 823-865.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300-319.

- Fredrickson, B. L., & Branigan, C. (2001). Positive emotions: Current issues and future directions. In T. J. Mayne & G. A. Bonanno (Eds.) *Emotions*, pp.123-151. New York: Guilford Press.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on September 11<sup>th</sup>, 2001. *Journal of Personality and Social Psychology*, 84, 365-376.
- Freud, S. (1895). *Studies on hysteria* (standard ed., Vol II). London, Hogarth Press.
- Freud, S. (1910). *Five lectures on psycho-analysis*. (stand ed., Vol XI). London, Hogarth Press.
- Frueh, B. C., Turner, S. M., & Beidel, D. C. (1995). Exposure therapy for combat-related PTSD: A critical review. *Clinical Psychology Review*, 15, 799-817.
- Gidron, Y., Peri, T., Connolly, J. F., & Shalev, A. Y. (1996). Written emotional disclosure in posttraumatic stress disorder: Is it beneficial for the patient? *Journal of Nervous and Mental Disease*, 184, 505-507.
- Gilbertson, M. W., Shenton, M. E., Ciszewski, A., Kasai, K., Lasko, N. B., Orr, S. P., & Pitman, R. K. (2002). Smaller hippocampal volume predicts pathologic vulnerability to psychological trauma. *Nature Neuroscience*, 5, 1242-1247.
- Greenberg, L. S. (2002). Integrating an emotion-focused approach to treatment into psychotherapy integration. *Journal of Psychotherapy Integration*, 12, 154-189.
- Greenberg, L. S., & Safran, J. D. (1989). Emotion in psychotherapy. *American Psychologist*, 44, 19-29.

- Greenberg, M. A., & Stone, A. A., (1992). Emotional disclosure about traumas and its relation to health: Effects of previous disclosure and trauma severity. *Journal of Personality and Social Psychology*, *63*, 75-84.
- Greenberg, M. A., Wortman, C. B., & Stone, A. A., (1996). Emotional expression and physical health: Revising traumatic memories or fostering self regulation? *Journal of Personality and Social Psychology*, *71*, 588-602.
- Herman, J. L. (1992). *Trauma and memory: The aftermath of violence—From domestic abuse to political terror*. New York: Basic Books
- Hughes, P., Turton, P., Hopper, E., & Evans, C.D. H. (2002). Assessment of guidelines for good practice in psychosocial care of mothers after stillbirth: a cohort study. *Lancet*, *360*, 114-118.
- Jaycox, L. H., Foa, E. B., & Morral, A. R. (1998). Influence of emotional engagement and habituation on exposure therapy for PTSD. *Journal of Consulting and Clinical Psychology*, *66*, 185-192.
- Kennedy-Moore, E., & Watson, J. C. (2001). How and when does emotional expression help? *Review of General Psychology*, *5*, 187-212.
- King, L. A. (2000). The health benefits of writing about life goals. *Personality and Social Psychology Bulletin*, *27*, 798-807.
- King, L. A. (2002). Gain without pain? Expressive writing and self-regulation. In S. J. Lepore & J. M. Smyth (Eds.), *The writing cure: How expressive writing promotes health and emotional well-being* (pp. 119-134). Washington, D. C.: American Psychological Association.

- King, L. A., & Miner, K. N. (2000). Writing about the perceived benefits of traumatic events: Implications for physical health. *Personality and Social Psychology Bulletin, 26*, 220-230.
- Knight, C. (2006). Groups for individuals with traumatic histories: Practice considerations for social workers. *Social Work, 51*, 20-30.
- Kovac, S. H., & Range, L. M. (2002). Does writing about suicidal thoughts and feelings reduce them? *Suicide & Life-Threatening Behavior, 32*, 428-440.
- LeDoux, J. (1996). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon & Schuster.
- Lepore, S. J., Greenberg, M. A., Bruno, M., & Smyth, J. M. (2002). Expressive writing and health: Self-regulation of emotion-related experience, physiology, and behavior. In S. J. Lepore & J. M. Smyth (Eds.), *The writing cure: How expressive writing promotes health and emotional well being* (pp. 99-117). Washington, DC: American Psychological Association.
- Lilienfeld, S. O. (2007). Psychological treatments that cause harm. *Perspectives on Psychological Science, 2*, 53-70.
- Littrell, J. (1998). Is the reexperience of painful emotion therapeutic? *Clinical Psychology Review, 18*, 71-102.
- Low, C. A., Stanton, A. L., & Danoff-Burg, S. (2006). Expressive disclosure and benefit finding among breast cancer patients: mechanisms for positive health effects. *Health Psychology, 25*, 181-189.
- Lyubomirsky, S., Sousa, L., & Dickerhoof, R. (2006). The costs and benefits of writing, talking, and thinking about life's triumphs and defeats. *Journal of Personality and Social Psychology, 90*, 692-708.

- Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review of Clinical Psychology, 1*, 167-195.
- Mayberg, H. S., Lozano, A. M., Voon, V., McNeely, H. E., Seminowicz, D., Hamani, C., Schwalb, J. M., & Kennedy, S. H. Deep brain stimulation for treatment-resistant depression. *Neuron, 45*, 651-660.
- Mayou, R. A., Ehlers, A., & Hobbs, M. (2000). Psychological debriefing for road traffic accident victims. *British Journal of Psychiatry, 176*, 589-593.
- McMillen, J. C. (1999). Better for it: How people benefit from adversity. *Social Work, 44*, 455-468.
- McNally, R. J., Bryant, R. W., & Ehlers, A. (2003). Does early psychological intervention promote recovery from posttraumatic stress? *Psychological Science in the Public Interest, 4*, 45-72.
- Meichenbaum, D. (1994). *A clinical handbook/practical therapist manual for assessing, and treating adults with post traumatic stress disorder*. Waterloo Ontario: Institute Press.
- Najavits, L. M., Gallop, R. J., & Weiss, R. D. (2006). Seeking Safety therapy for adolescent girls with PTSD and substance abuse: a randomized controlled trial. *Journal of Behavioral Health Services & Research, 33*, 453-463.
- Neimeyer, R. A. (2000). Searching for the meaning of meaning: Grief therapy and the process of reconstruction. *Death Studies, 24*, 541-558.
- Nolen-Hoeksema, S. (1990). *Sex differences in depression*. Stanford, CA: Stanford University Press.
- Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science, 10*, 173-176.

- Páez, D., Velasco, C., González, J. L. (1999). Expressive writing and the role of alexithymia as a dispositional deficit in self-disclosure and psychological health. *Journal of Personality and Social Psychology, 77*, 630-641.
- Pavio, S. C., & Greenberg, L. S. (1995). Resolving 'unfinished business': efficacy of experiential therapy using empty-chair dialogue. *Journal of Consulting and Clinical Psychology, 63*, 419-425.
- Pennebaker, J. W. (1990). *Opening up: The healing power of confiding in others*. New York: Avon Books.
- Pennebaker, J. W. (1993). Putting stress into words: Health, linguistic, and therapeutic implications. *Behavior Research and Therapy, 31*, 539-548.
- Pennebaker, J. W., & Beall, S. K. (1986). Confronting a traumatic event: Toward an understanding of inhibition and disease. *Journal of Abnormal Psychology, 95*, 274-281.
- Pennebaker, J. W., & Francis, M. E. (1996). Cognitive, emotional, and language processes in disclosure. *Cognition and Emotion, 10*, 601-626.
- Pennebaker, J. W., & Graybeal, A. (2001). Patterns of natural language use: Disclosure, personality, and social integration. *Current Directions in Psychological Science, 10*, 90-93.
- Pennebaker, J. W., Mayne, T. J., & Francis, M. E. (1997). Linguistic predictors of adaptive bereavement. *Journal of Personality and Social Psychology, 72*, 863-871.
- Petrie, K. A., Booth, R. J., Pennebaker, J. W., Davison, K. P., & Thomas, M. G. (1995). Disclosure of trauma and immune response to a Hepatitis B vaccination program. *Journal of Consulting and Clinical Psychology, 63*, 787-792.

- Petrie, K.A., Fontanilla, I., Thomas, M., Booth, R., & Pennebaker, J. (2004). Effect of written emotional expression on immune function in patients with human immunodeficiency virus infection: A randomized trial. *Psychosomatic Medicine*, *66*, 272-275.
- Pitman, R. K., Altman, B., Greenwald, E., Longpre, R. E., Macklin, M.I., Poire, R. E., & Steketee, G. S. (1991). Psychiatric complications during flooding therapy for posttraumatic stress disorder. *Journal of Clinical Psychiatry*, *52*, 17-20.
- Quirk, G. J. (2007). Prefrontal-amygdala interactions in the regulation of fear. In J. J. Gross (Ed.), *Handbook of emotion regulation*, pp. 27-46. New York: Guilford Press.
- Resick, P. A., Nishith, P., Weaver, T. L., Astin, M. C., & Feuer, C. A. (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims. *Journal of Consulting and Clinical Psychology*, *70*, 867-879.
- Ressler, K. J., Rothbaum, B. O., Tannenbaum, L., Anderson, P., Graap, K., Zimand, E., Hodges, L., & Davis, M. (2004). Cognitive enhancers as adjuncts to psychotherapy: use of D-cycloserine in phobic individuals to facilitate extinction of fear. *Archives of General Psychiatry*, *61*, 1136-1144.
- Riggs, D. S., Dancu, C. V., Gershuny, B. S., Greenberg, D., & Foa, E. B. (1992). Anger and post-traumatic-stress-disorder in female crime victims. *Journal of Traumatic Stress*, *5*, 613-625.
- Rose, S., & Bisson, J. (1998). Brief early psychological interventions following trauma: A review of the literature. *Journal of Traumatic Stress*, *11*, 697-710.

- Rose, S., Brewin, C. R., Andrews, B., & Kirk, M. (1999). A randomized controlled trial of individual psychological debriefing for victims of violent crime. *Psychological Medicine, 29*, 793-799.
- Schnurr, P. P., Friedman, M. J., Foy, D. W., Shea, M. T., Hsieh, F. Y., Lavori, P. W., Glynn, S. M., Wattenger, M., & Bernardy, N. C. (2003). Randomized trial of trauma-focused group therapy for posttraumatic stress disorder: Results from a Department of Veterans Affairs Cooperative Study. *Archives of General Psychiatry, 60*, 481-489.
- Semler, C. N., & Havey, A. G. (2004). Monitoring for sleep-related threat: A pilot study of the sleep associated monitoring index (SAMI). *Psychosomatic Medicine, 66*, 242-250.
- Smyth, J. M., Stone, A. A., Hurewitz, A., & Kaelli, A. (1999). Effects of writing about stressful experiences on symptom reduction in patients with asthma or rheumatoid arthritis. *Journal of the American Medical Association, 281*, 1304-1309.
- Solomon, S. D., Gerrity, E. T., & Muff, A. M. (1992). Efficacy of treatments for posttraumatic stress disorder: An empirical review. *Journal of the American Medical Association, 268*, 633-638.
- Spera, S., Buhrfeind, E. D., & Pennebaker, J. W. (1994). Expressive writing and coping with job loss. *Academy of Management Journal, 37*, 722-733.
- Stanton, A. L., Danoff-Burg, S., Sworowski, L. A., Collins, C. A., Branstetter, A. D., Rodriguez-Hanley, A., Kirk, S. B., Austenfeld, J. L. (2002). Randomized, controlled trial of written emotional expression and benefit finding in breast cancer patients. *Journal of Clinical Oncology, 20*, 4160-4168.

- Stein, N. L., Folkman, S., Trabasso, T., & Richards, T. A. (1997). Appraisal and goal process as predictors of psychological well-being in bereaved caregivers. *Journal of Personality and Social Psychology, 72*, 872-884.
- Stroebe, W., Schut, H., & Stroebe, M. S. (2005). Grief work, disclosure, and counseling: Do they help the bereaved? *Clinical Psychology Review, 25*, 395-414.
- Taylor, S. E., Kemeny, M. E., Bower, J. E., Gruenewald, T. L., & Reed, G. M. (2000). Psychological resources, positive illusions, and health. *American Psychologist, 55*, 99-109.
- Weiss, B., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1992). Some consequences of early harsh discipline: Child aggression and a maladaptive social information processing style. *Child Development, 63*, 1321-1335.
- Whelton, W. J. (2004). Emotional processes in psychotherapy: evidence across therapeutic modalities. *Clinical Psychology and Psychotherapy, 11*, 58-71.
- Wranik, T., Barrett, L. F., & Salovey, P. (2007). Intelligent emotion regulation: Is knowledge power? In J. P. Gross (Ed.), *Handbook of Emotion Regulation*, pp. 393-426. New York: Guildford Press.
- Yalom, I. (1994). Outpatient group psychotherapy. Presentation at the Evolution of Psychotherapy Congress in Hamburg, Germany.