



# The Effects of Writing About Traumatic Experience

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In the early 1980s, a number of intriguing results started turning up in labs around the world. Although we had known for many years that traumatic experiences were associated with health problems, a closer look suggested that how people interpreted and coped with the trauma was equally important. In our own work, we were discovering that individuals who did not talk about traumas were far more likely to suffer from health problems than people who had comparable experiences but who had talked about them - even when controlling for social support, age, sex, etc. We eventually discovered that having people disclose traumatic experiences in the laboratory could profoundly affect markers of physical and mental health.

By the mid-1980s, we were finding that having people write about traumas was a particularly efficient way to improve health (1). Since the first studies, dozens of similar experiments using the writing technique have been conducted. By way of background, the standard laboratory writing technique involves randomly assigning participants to one of two or more groups. All writing groups are asked to write about assigned topics for 3-5 consecutive days, 15-30 minutes each day. Writing is generally done in the laboratory with no feedback given. Those assigned to the control conditions are typically asked to write about superficial topics, such as how they use their time. The standard instructions for those assigned to the experimental group are a variation on the following:

For the next (three) days, I would like for you to write about your very deepest thoughts and feeling about the most upsetting or traumatic experience of your entire life. In your writing, I'd like you to really let go and explore your very deepest emotions and thoughts. You might tie your topics to your relationships with others, including parents, lovers, friends, or relatives, to your past, your present, or your future, or to who you have been, who you would like to be, or who you are now. You may write about the same general issues or experiences on all days of writing or on different topics each day. All of your writing will be completely confidential. Don't worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up.

These simple instructions have proven to be exceptionally powerful. Participants - from children to the elderly, from honor students to maximum security prisoners - disclose a remarkable range and depth of traumatic experiences. Lost loves, deaths, sexual and physical abuse incidents, and tragic failures are common themes in all of our studies. If



nothing else, the paradigm demonstrates that when individuals are given the opportunity to disclose deeply personal aspects of their lives, they readily do so. Even though a large number of participants report crying or being deeply upset by the experience, the overwhelming majority report that the writing experience was valuable and meaningful in their lives.

Researchers have relied on a variety of physical and mental health measures to evaluate the effect of writing. As discussed in recent reviews (1, 2), writing about emotional experiences relative to writing about superficial control topics has been found to be associated with significant drops in physician visits from before to after writing among relatively healthy samples. Writing about emotional topics has also been found to influence immune function in beneficial ways, including t-helper cell growth antibody response to Epstein-Barr virus, and antibody response to hepatitis B vaccinations. Self reports also suggest that writing about upsetting experiences, although painful in the days of writing, produce long-term improvements in mood and indicators of well-being compared to controls.

Behavioral changes have also been found. Students writing about emotional topics evidence improvements in grades in the months following the study. Senior professionals who have been laid off from their jobs get new jobs more quickly after writing. Consistent with the direct health measures, university staff members who write about emotional topics are subsequently absent from their work at lower rates than controls. Interestingly, relatively few reliable changes emerge using self-reports of health-related behaviors. That is, after writing, experimental participants do not report exercising more or smoking less, The one exception is that older samples of men and women in their 40s and older report that writing reduces alcohol intake.

The writing effect is remarkably robust. Studies comparing writing alone versus talking either into a tape recorder or to a therapist find comparable biological, mood, and cognitive effects. Indeed, the effect sizes of the writing paradigm compare favorably with those of psychotherapy (2). In fact, in a recent study of individuals with arthritis and asthma, Smyth and his colleagues (3) found that those individuals who were asked to write about traumatic experiences compared to control writing showed objective health improvements at rates superior to what has been found in any psycho-therapies with comparable samples ( $d$ 's > 1.00 for most behavioral measures). The effects hold up in studies conducted throughout Europe, Japan, North America, and across social classes.

Very few consistent personality or individual difference measures have distinguished who does versus does not benefit from writing. Most commonly-examined variables unrelated to outcomes include anxiety (or Negative Affectivity), and inhibition or constraint. The one study that preselected participants on hostility found that those high in hostility benefited more from writing than those low in hostility (4). In a recent study



by Paez and Velasco (5), individuals high in the trait of alexithymia benefited more from writing than those low in the trait. Alexithymia is characterized by the inability to label and understand one's own emotional state. Finally, in the Smyth meta-analysis (2), males were found to benefit more than females. The interesting pattern that is emerging from this work is that people who naturally don't talk about their emotional state to a great degree (men, alexithymics, and those high in hostility) benefit more from writing about traumatic experiences than more open individuals.

### Why Does Writing about Traumatic Experiences Work?

Most of the research on disclosure has been devoted to demonstrating its effectiveness rather than on identifying the underlying mechanisms. Two very broad models that have attempted to explain the value of disclosure are those that invoke inhibitory processes and cognitive processes.

**Inhibition and disclosure.** The original theory that motivated the first studies on writing was based on the assumption that not talking about important psychological phenomena was a form of inhibition. Drawing on the animal and psychophysiological literatures, it was posited that active inhibition was a form of physiological work. This inhibitory work, which is reflected in autonomic and central nervous system activity, could be viewed as a long-term low-level stressor. Such stress, then, could cause or exacerbate psychosomatic processes thereby increasing the risk of illness and other stress-related disturbances. Just as constraining thoughts, feelings, or behaviors linked to an emotional upheaval was stressful, letting go and talking about these experiences should, in theory, reduce the stress of inhibition.

Findings to support the inhibition model of psychosomatics are growing. Individuals who conceal their gay status, traumatic experiences in their past, or who are considered inhibited or shy by others exhibit more health problems than those less inhibited (6). Whereas inhibition appears to contribute to long term health problems, the evidence that disclosure reduces inhibition and thereby improves health has not materialized. For example, Greenberg and Stone (7) found that individuals benefited equally from writing about traumas about which they had told others as about traumas that they had kept secret. Self-reports of inhibition before and after writing have not consistently related to health changes. At this point, then, the precise role of inhibition in promoting health within the writing paradigm is not proven.

**Cognitive changes associated with writing.** In the last decade, several studies have persuasively demonstrated that writing about a trauma does more than allow for the reduction of inhibitory processes - it appears to bring about changes in the ways people think. Follow-up interviews in the months after writing indicate that people extol the



virtues of the writing paradigm by noting that it changed the ways they understood what had happened. Their explanations almost always included words like "I now realize..or "It helped me to understand..."

In recent years, we have begun analyzing the language that individuals use in writing about emotional topics. Our first strategy was to have independent raters evaluate the essays, however, the relatively poor inter-judge reliability led us to develop a computerized text analysis system. In 1991, we created a computer program called LIWC (Linguistic Inquiry and Word Count) that analyzed essays in text format. LIWC had been developed by having groups of judges evaluate the degree-to which about 2,000 words or word stems were related to each of several dozen categories (8). The categories included negative emotion words (sad, angry), positive emotion words (happy, laugh), causal words (because, reason), and insight words (understand, -realize). For each essay that a person wrote, we were able to quickly compute the percentage of total words that represented these and other linguistic categories.

Analyzing the experimental subjects data from 6 writing studies, three linguistic factors reliably predict improved physical health. First, the more that individuals use positive emotion words, the better their subsequent health. Second, a moderate number of negative emotion words predicts health. Both very high and very low levels of negative emotion word use correlate with poorer health. Third, and most important, an increase in both causal and insight words over the course of writing is strongly associated with improved health (9). Indeed, this increase in cognitive words covaries with judges' evaluations of the construction of a story or narrative. That is, people who benefit from writing begin with a poorly organized description and progress to a coherent story by the last day of writing.

The language analyses are particularly promising in that they suggest that certain features of essays predict long term physical health. Further, these features are congruent with current views on narratives in psychology. The next issue that is currently being addressed is the degree to which cohesive stories or narratives predict changes in real world cognitive processes. That is, does a coherent story about a trauma produce improvements in health by reducing ruminations or flashbacks? Does a story ultimately result in the assimilation of an unexplained experience that allows the person to get on with life? To what degree does the use and integration of emotion language affect the narrative and, ultimately, health?

Implications for the Use of Writing in PTSD



Despite the clear relevance of the writing technique for the treatment of PTSD, relatively few studies have actually been conducted. Indeed, two lines of research have yielded contradictory findings. In two studies in the Netherlands, Schoutrop and her colleagues (10) enlisted community samples through newspaper ads who met criteria for PTSD using the Impact of Events Scale (IES). Most participants were suffering from accidents, robbery, violent crime or some combination of such events. In both of her studies, there were significant reductions in IES scores for those who wrote about the emotional topics compared with controls who wrote about superficial topics.

On the contrary, Gidron and his colleagues in Israel (11) employed 14 outpatients with significant PTSD symptoms and had them write about either the trauma or about superficial topics for 3 consecutive days. Unlike other writing studies, however, the authors also required the participants to orally expand on what they had written. Unlike any other writing study, the authors found that the writing, /talking intervention for the emotion condition resulted in elevated symptoms and more health problems than for the controls. Ironically, the Gidron paper bears an intriguing similarity to some of the Critical Incident Stress Debriefing (CISD) interventions. That is, individuals were required to orally express their feelings as part of the “therapy.”

Our sense is that the Gidron project points to a critical feature of the original writing technique: in writing, people are able to dose themselves. That is, individuals are encouraged to write in as much detail with as much emotional involvement as they desire. There is no social feedback nor “pushing” on the part of the experimenter. It is very possible, then, that excessive prodding to express emotions in a social setting may be counterproductive.

We encourage researchers to explore the viability of the writing paradigm with individuals who have experienced trauma. Based on our research so far, we suggest the following strategies:

- We do not recommend writing immediately after massive trauma. It would probably be more effective at least 2-3 weeks after the event. After that time, we have generally found it to be effective for most individuals who continue to think, dream, or worry about the events – even if it is 40 years later.
- Set aside a fixed number of days (e.g. 5 days, 30 minutes per day) for the initial intervention. Repeated interventions in subsequent weeks or months may serve to integrate new experiences.
- It is possible that in extreme cases of PTSD – where possible hippocampal damage has occurred – writing may not be helpful.



- For individuals who are unable or unwilling to write, have them talk alone into a tape recorder. Recent studies indicate talking in this manner is as effective as writing.
- From a clinical perspective, encourage the client to experiment with different writing strategies, at different times, using their own novel procedures.

Writing about significant emotional experiences has been shown to be a powerful intervention associated with long term benefits. Moreover, writing is most beneficial for those that find it most difficult to discuss their feelings and experiences. Evidence suggests that this intervention works by reducing inhibition through disclosure and encouraging cognitive changes about the chosen topic. This writing intervention is easy to incorporate into existing treatment programs, easy to adapt to special circumstances, and allows individuals to dose themselves.

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