The Writing Cure:
How Expressive Writing Promotes Health

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The expression of emotion is integral to most psychotherapeutic traditions and typically involves identifying, labeling, and disclosing emotional experiences. Regardless of the type of therapy (e.g., behavioral, interpersonal, psychodynamic), clients tend to self-disclose at high rates. Individuals across a wide range of settings and cultures appear to desire the opportunity to disclose. A survey of samples from six different international locations (Korea, Singapore, Japan [Kyoto and Sapporo], France, and the USA) demonstrated that the rate of social sharing of unpleasant emotions was comparable among various countries with historically different rates of disclosure (Rimé, Yogo, & Pennebaker, 1996). Findings suggest that individuals from Japan also report partaking in the social sharing of unpleasant emotion (Rimé, Yogo, & Pennebaker, 1996). Furthermore, this appears true across a wide range of discrete emotions (Yogo & Onoue, 1998). Well over 70% of Japanese participants reported socially sharing a variety of emotions, that included shame, guilt, anger, disgust, sadness, love, anxiety, fear, and joy (Yogo & Onoue, 1998). These findings have received further validation from the results of a study that utilized a Self-Concealment Scale and found that Japanese participants have a comparable desire to disclose their emotional experiences to others (Kawano, 1998).

Although individuals from various cultures may have a desire to disclose their emotional experiences, barriers to interpersonal disclosure may limit emotional expression. Several factors may mediate disclosure within interpersonal settings. These can include social

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constraints, social stigma, and worry about receiving a negative response. Social constraints may often prevent individuals from expressing and / or discussing negative events (Lepore, Silver, Wortman, & Wayment, 1996). The social stigma associated with some negative life events may make it difficult to share the event with others. Additionally, many individuals may not have access to sympathetic or supportive listeners in their lives. Other people might have access to a support network, but receive support that is perceived as unhelpful or insensitive (Wortman & Silver, 1989), and subsequently refrain from further discussing the trauma. An alternative to interpersonal disclosure and to traditional psychotherapy is written emotional expression. Writing has long been a common strategy for expressing strong emotion (e. g., biographies, letters, poetry, song, etc.) and can avoid many of the aforementioned barriers to interpersonal disclosure, particularly since it is often done in private. Structured expressive writing has been used as an intervention to foster emotional expression without regard to social stigma, and encourages individuals to approach and express their emotions via writing in an experimental setting.

**Disclosure and Health Research**

Numerous studies have examined the effects of verbal and written disclosure about emotional experiences on health. Naturalistic studies have examined disclosure as it occurs in individuals’ day-to-day lives. Several such studies suggest that disclosure of emotionally significant experiences is related to better outcomes (Davison & Pennebaker, 1997; Pennebaker & O’Heeron, 1984; Silver, Boon, & Stones, 1983). Davison & Pennebaker (1997) sampled online newsgroups and mailing lists for six disease conditions (breast cancer, prostate cancer, diabetes, heart disease, arthritis, and chronic fatigue syndrome). The language used within these various social support networks was then analyzed using a computerized text analysis program to identify linguistic patterns in communication among the various illness groups. Although conclusions are correlational, they suggest that different patient groups are characterized by different styles of expressions and make sense of their illness in distinct ways within these online communities (Davison & Pennebaker, 1997). In another study, a sample of 19 spouses of suicide and accidental-death victims completed questionnaires approximately one year after their spouse’s death regarding their coping strategies, social support system, and perceived health (Pennebaker & O’Heeron, 1984). Correlational analyses suggest that individuals who talked to their friends more about their spouse’s death and ruminated less about the death, were less likely to have health problems (Pennebaker & O’Heeron, 1984). A study by Silver, Boon, and Stones (1983) surveyed 77 women who were victims of father-daughter incest in an effort to understand how they made sense of their aversive life experience. Data from the study suggest that women who did not have someone to confide in about their experience, were significantly less likely to report having made sense of their incest experience than women who did have a confidant (Silver, Boon, & Stones, 1983).

Although naturalistic studies have high
external validity (or generalizability to different people and settings), they pose a threat to internal validity (i.e., the extent to which results can be attributed to the experimental manipulation rather than to other extraneous influences). Internal validity is threatened because the results are correlational and thus severely limit conclusions regarding causality. Correlational studies provide information regarding the association between disclosure and various outcomes, and therefore lack direct evidence that disclosure causes the effects. Such a demonstration requires an experimental research context wherein participants are randomly assigned to different conditions or groups in order to assure that the groups do not systematically differ from one another before the experimental manipulation. The randomization of participants to experimental and control groups substantially increases the probability that groups will be equal prior to the experimental manipulation and provides more confidence that the results are due to the experimental manipulation.

Written Disclosure Research Review

The prototypical writing study manipulates disclosure in the laboratory by randomly assigning participants to either an experimental or a control group; wherein experimental participants are instructed to write about a stressful or traumatic experience for approximately 20 minutes across 3 to 5 days (e.g., Pennebaker & Beall, 1986; Smyth, 1998). The effects of this emotional disclosure are usually compared to writing about emotionally neutral writing topics in the control group (such as an objective description of time planning). Participants in both groups are usually assured of confidentiality and encouraged to write without regard to spelling, style, or grammar. The time and attention is matched between conditions in an attempt to equalize all factors except for the experimental manipulation. Consequently, the intended sole difference between the experimental and control groups are the writing instructions. Individuals in the experimental condition are most commonly encouraged to identify and explore their cognitions and emotions surrounding a stressful experience. Participants are typically instructed to “write about the most stressful or upsetting experiences of your entire life.” Instructions direct participants to write about an experience that has affected them very deeply. Writing instructions also emphasize the importance of writing about both thoughts and feelings regarding the experience.

In contrast, control participants are instructed to write in an emotionally neutral way about benign topics, such as their plans for the week and upcoming week (framed as time management). Prior studies that have utilized these instructions demonstrated that control participants view the writing exercise as valid and report it as valuable, although there is no evidence that it influences mental or physical health outcomes (e.g., Hockemeyer & Smyth, 2002). One important issue is if people asked to write in a personal and emotional manner, particularly outside of a therapeutic relationship, would do so. In short, it appears that asking people to write about stress and / or traumatic experiences, or other powerful emotions, is something most
are willing and able to do. Writing is a powerful disclosure mechanism across samples without “special” writing skills. Samples have ranged from children to elderly participants, with varying education levels (ranging from honor students to maximum security prisoners). The range of traumatic topics has been formidable as well, including the death of a loved one, personal illness or injury, thoughts of suicide, physical / sexual abuse, relationship problems, and transgressions. Expressive writing groups tend to do “better” than neutral writing groups across a wide range of outcomes across several cultures and languages (Smyth & Pennebaker, 1999). Furthermore, preliminary work suggests that this intervention can produce benefit in Japanese participants (Yogo, 2003; Yogo & Fujihara, 2005). The health benefits of writing about stressful or traumatic events within laboratory settings have now been widely documented among samples of Japanese undergraduate students (Arai & Yukawa, 2006; Takagi & Ohira, 2004; see Sato, 2005 for review).

Although findings suggest that people are willing to write about personal topics within the laboratory setting, researchers have yet to demonstrate the effectiveness of this intervention using the same scientific rigor. Therefore, it is less clear whether expressive writing confers beneficial results when conducted outside of the traditional laboratory or medical settings. Compliance with the intervention may be a particular point of concern when writing is conducted in less structured settings, such as participants’ homes (e. g., Gallagher & Maclachlan, 2002; Sheffield, Duncan, Thomson, & Johal, 2002). Recent evidence suggests that different samples (namely, undergraduate students and community participants) may respond differently to different aspects of the intervention context, which includes both the location of writing and the legitimate authority of the research staff (Nazarian & Smyth, 2007). These findings are particularly relevant to effectiveness studies since information about the intervention context provides valuable information about the generalizability of results. This underscores the importance of providing descriptive information regarding the context of expressive studies (e. g., the status and training of individuals who have participant contact, location of writing, etc.) as well as any procedural variations.

Beneficial outcomes of written emotional disclosure. Several meta-analyses have been conducted that examine the effects of the expressive writing intervention. A meta-analysis consists of statistical methods for generating an estimate of effect size by cumulating information from all available studies. The first such meta-analysis consisted of 13 randomized experiments that utilized experimental manipulation of written emotional disclosure and revealed that the writing intervention produced beneficial health outcomes across several domains (each of which was measured several months post-writing) among generally healthy samples (Smyth, 1998). The outcome types that have been influenced by the writing task were grouped into five general categories: (1) Physiological outcomes (e. g., natural killer cell activity, viral antibodies, liver enzyme function); (2) Psychological well-being (e. g., positive /
negative mood, depression); (3) Reported health (e. g., health center visits, symptom reports, upper respiratory infection reports); (4) Academic / Employment (e. g., absenteeism, reemployment, grade point average); and (5) Health behaviors (e. g., alcohol, tobacco or other drug use, exercise, sleep, diet). The overall effect size for the writing intervention was $d = .47$, which is comparable to other psychological interventions, such as psychotherapy (Smyth, 1998).

A number of recent meta-analyses have since supplemented these findings by incorporating the large number of expressive writing studies that have been conducted since 1998. Two such quantitative reviews examined the effect of the intervention on specific outcomes; namely, the health outcomes of clinical populations and health care utilization (Frisina, Borod, & Lepore, 2004; Harris, 2006, respectively). Frisina, Borod, & Lepore (2004) meta-analyzed nine studies that included participants with physical or psychological disorders and found the mean weighted effect size of expressive writing on health outcomes was $d = .19$. Most notably, the intervention more effectively improved physical rather than psychological health outcomes (Frisina, Borod, & Lepore, 2004). Another recent quantitative review found that expressive writing significantly reduced health care utilization in healthy samples but not in samples with pre-existing medical or psychological conditions (Harris, 2006). These results are difficult to interpret as it is not clear what effect, if any, this finding has on participants’ actual health (Harris, 2006).

Most recently, Frattaroli (2007) meta-analyzed 146 studies and computed seven separate effect sizes for each study; namely, an overall effect size and one for each of six outcome types (psychological health, physiological functioning, reported health, health behaviors, general functioning, and subjective impact of the intervention; Frattaroli, 2007). The overall effect size found in this meta-analysis was $r = .075$, a more modest effect size than the aforementioned meta-analyses. Taken together, written emotional disclosure appears to reliably produce some benefit across a wide range of outcomes (e. g., reported health, physiology, well-being, performance), suggesting that these outcomes are not merely a reporting shift or bias.

**Writing as a Supplemental Treatment for Illness**

A growing area of research is the extension of expressive writing to chronically ill populations and whether this intervention might be a useful supplement in the care of chronic disease. One of the first such published randomized trials examined the effects of expressive writing among community residents with chronic asthma or rheumatoid arthritis (Smyth, Stone, Hurewitz, & Kaell, 1999). Participants were randomly assigned to write about either the most stressful events of their life or neutral topics. Health was assessed at baseline, and at two weeks, two months, and four months following the writing sessions. Self-reported health and symptoms were supplemented by medically relevant and objectively verifiable disease outcomes. Among asthma patients, pulmonary function was assessed using spirometry and rheumatoid arthritis patients had clinical
examinations conducted by a rheumatologist. All assessments were performed “blind” to condition. Participants in the expressive writing group showed a significant improvement in health outcomes, as compared to control group participants. Clinically significant changes were also observed — asthma patients showed a 15% change from baseline (FEV₁) and rheumatoid arthritis patients had a shift in their rating category of severity (asymptomatic / mild / moderate / severe / very severe).

Various studies have demonstrated that adding written disclosure to standard medical care appears to be helpful. Recent work has replicated and extended this finding across a variety of diseases. These have included multiple cancer types (e. g., Stanton et al., 2002; Zakowski et al., 2004), HIV (e. g., Rivkin, Gustafson, Weingarten, & Chin, 2005), arthritis (e. g., Broderick, Stone, Smyth, & Kaell, 2004), chronic pelvic pain (e. g., Norman et al., 2004), and vaccination studies (e. g., Petrie et al., 1995). A number of studies have failed to replicate these beneficial findings in certain populations, for example, asthma patients (Harris, Thoresen, Humphreys, & Faul, 2005), bereavement (Stroebe et al., 2002), and breast cancer (Walker, Nail, & Croyle, 1999). It is thus evident that much work remains to be done in this fruitful area of research.

Mechanisms: How Does Writing Help?

Although the robust efficacy of expressive writing was established early in the development of the literature (e. g., Smyth, 1998), there is considerably less clarity regarding the underlying mechanisms responsible for the observed effects of written emotional disclosure. Several theoretical explanations have been proposed, including the inhibition model, the integrated model, exposure theory, the experiential model, self-regulation theory, cognitive-processing theory, as well as models that implicate cognitive and biological parameters. Prior to reviewing these mechanisms, several general points should be kept in mind. The effects of the writing intervention appear to extend far beyond the bounds of the actual writing session. The thoughts, emotions, and experiences that are expressed through writing may remain cognitively accessible, and influence emotional states and behavior beyond the typical 20 minutes of writing. It is therefore challenging to tease apart exactly which mechanisms are responsible and at what point in the process they take place (e. g., writing may produce short-term changes that unfold over time and across a variety of systems, including cognitive, affective, behavioral, and social).

The inhibition model. Early research examined the role of inhibition as a form of physiological work that results in autonomic arousal. Over time, this arousal was thought to function as a chronic, low-level stressor. This model proposes that the inhibition of thoughts and emotions about an upsetting event may increase the risk of illness and other stress-related conditions (e. g., Pennebaker, Hughes, & O’Heeron, 1987). The corollary to this view is that disclosing thoughts and feelings should reduce the stress of inhibition and produce benefit. Evidence for the role of inhibition has been mixed, suggesting that this model may not fully account for the effects of expressive writing. Greenberg and Stone (1992)
experimentally manipulated previous disclosure in a randomized study and did not find any difference between participants asked to write about a previously disclosed trauma and those participants who wrote about an undisclosed trauma. In addition, pre to post-writing changes in self-rated inhibition have not consistently been related to improvement. Furthermore, a recent meta-analysis did not find evidence to support the prediction that individuals who may tend to inhibit thoughts and emotions (e. g., typically thought to include males, Asian participants, individuals with emotionally inhibited personalities) benefited more from written emotional disclosure (Frattaroli, 2007).

Integrated model for the benefits of written disclosure. Another early model suggested that traumatic or stressful memories might be stored as sensory or affective structures. According to this explanation, the forced transduction of these types of memories to a linguistic format is presumed to promote a narrative formation and organization. Although this transduction process can initially increase distress, it may modify the fear structure associated with the trauma, in turn facilitating the integration of the traumatic memory. Once these memories are integrated, they should no longer cause intrusive re-experiencing, consequently reducing conditioned fear responses. The chronic hyperarousal associated with intrusion and fear responses should be eliminated, ultimately leading to reductions in psychological and physiological symptomatology. In effect, this results in a reduction in intrusions, ruminations, and associated physiological arousal, as well as reduced symptomatology (Smyth, 1998; Smyth & Pennebaker, 1999). Alternatively, some evidence suggests that intrusions pertaining to the stressor / traumatic event may persist after the intervention, although the emotional impact of these intrusions is attenuated (e. g., Lepore, 1997; Smyth et al., 2002). In other words, individuals may continue to have unbidden and / or unwanted thoughts about a stressful or traumatic experience, but find them less distressing when they do occur.

Exposure model. More recent, related, theories suggest an exposure theory underlying the benefits of expressive writing. Consistent with an exposure model of therapy, this theory proposes that repeated expression and exposure to stress or trauma-related thoughts and emotions should lead to the eventual extinction of such thoughts. Experimental evidence in support of this theory suggests that repeated exposure to a specific stimuli (i. e., repeatedly writing about the same traumatic experience) has been found to be more effective than requiring individuals to write about different traumatic events during each writing session (Sloan, Marx, & Epstein, 2005). Results from a recent meta-analysis found strong support for exposure theory, relative to some of the other theories covered herein (Frattaroli, 2007).

Experiential model. In accordance with the early work of Janet (e. g., 1909), there is evidence that supports an experiential aspect of writing. An experiential model of therapy proposes that schemas guide the processing of stressful or traumatic events. Such schemas include cognitive representations of the experience, affective responses, and specific patterns of
autonomic arousal related to the event (Greenberg & Safran, 1987). Strong unresolved emotions related to a stressful or traumatic event can be held, in part, as somatic states (e.g., tension, arousal; Gendlin, 1996; Greenberg & Safran, 1987). According to this model, processing a stressful or traumatic event enables an individual to re-experience stress-related thoughts, emotions, and sensations, and come to see the problem in a new — less threatening — manner (Lutgendorf & Ullrich, 2002). Findings suggest that the combination of cognitive and emotional processing, along with a moderate level of emotional arousal is required to produce change (Lutgendorf & Ullrich, 2002). The depth of processing that occurs during disclosure is a significant component of this model, as it is thought to directly relate to better psychological and immune functioning via cognitive restructuring and release of somatic tension.

Self-regulation. Several models have been proposed involving the regulation of thought, behavior, and most notably, affect. Dysregulated emotion is problematic because it may be either excessively controlled or excessively under-controlled. Writing may normalize an emotional experience and possibly subsequent experiences and emotional behaviors. Research supports the view that emotion dysregulation (either excessive or inadequate control over emotional experience, expression, physiology, or behavior) can negatively impact mental and physical health. Expressive writing influences attention, habituation to stressful stimuli and to negative emotions, and may influence restructuring of cognitions related to stressors and stress responses (Lepore, Greenberg, Bruno, & Smyth, 2002). Evidence consistent with emotion regulation processes has been demonstrated in several writing studies (e.g., Cameron & Nicholls, 1998; Greenberg et al., 1996; King, 2001; King & Miner, 2000), though it has received mixed support in a meta-analytic test of specific predictions related to this theory (Frattaroli, 2007).

Cognitive processing theory. Pennebaker and colleagues have examined linguistic predictors of improved physical health by analyzing the content of expressive writing essays (Pennebaker & Francis, 1996; Pennebaker, Mayne, & Francis, 1997). The Linguistic Inquiry and Word Count (LIWC) is a computerized text analysis that provides quantitative information of written text (Pennebaker, Mayne, & Francis, 1997). The LIWC computes language statistics (e.g., word count, sentence length, use of “big” words) and linguistic dimensions (e.g., pronouns) and also provides information about psychological processes by counting related words in written text. These may include the use of positive and negative words in each essay, as well as words related to causal or insight thinking (e.g., cause, effect, reason, because). Computing the use of past, present, and / or future tense words may also be used to measure the relativity of each writing sample.

Linguistic predictors of improved physical health included the use of more positive emotion words, moderate negative emotion words, and an increase in causal and insight words (e.g., cause, effect, reason, because) over the course of writing. Individuals who benefit most from the writing, appear to progress from using
relatively few causal and insight words to using them more often by the last day of writing (Pennebaker, Mayne, & Francis, 1997). The authors note that people who showed this pattern of language use appeared to be telling a story over the course of writing. Although this research support is correlational, it suggests that narrative formation is a critical part of the writing process (Pennebaker, Mayne, & Francis, 1997). In an experimental test of narrative formation, Smyth, True, & Souto (2001) manipulated narrative levels of written emotional disclosure essays and found that narrative structure (stories with a clear start, middle, and finish) was necessary to produce beneficial changes. Moreover, results found that participants who expressed their thoughts and feelings in an unstructured, or fragmented, format were indistinguishable from participants writing about emotionally neutral topics (Smyth, True, & Souto, 2001).

Cognitive parameters. Ongoing work suggests core cognitive capacities are involved in the writing task. Both historical trauma and current stress are related to impaired core cognitive function, including working memory and executive processing. Intrusive thoughts are related to impaired core cognitive function (e.g., working memory) and partially mediate the relationship between stress and cognition. Some evidence suggests that expressive writing interventions can improve working memory and changes in working memory mediated other improvements (such as GPA; Klein, 2002). As already mentioned, the role of intrusions is less clear. It has not been determined whether the writing intervention has any effect on intrusions, results in fewer intrusions, or may be related to equal rates of intrusion, but with less of an impact (e.g., Lepore, 1997; Smyth et al., 2002).

Biological parameters. There is abundant evidence that writing influences a variety of biological parameters, including autonomic activity, endocrine function, and immune function (e.g., Esterling, Antoni, Kumar, & Schneiderman, 1990; Lutgendorf, Antoni, Kumar, & Schneiderman, 1994; McGuire, Greenberg, & Gevirtz, 2005; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Sloan & Epstein, 2005). Whether this is an “upstream” or “downstream” effect with regard to health outcomes has yet to be determined. That is, does writing lead to physiological changes that promote health, or does writing (via some alternate pathway) lead to improved health that subsequently alters (improves) physiological function? Such temporal sequencing is difficult to determine, as the cognitive / emotional / physiological systems are clearly dynamic and recursive (e.g., Blalock, 1984), but such demonstrations are critical to improve our understanding of potential mechanisms. Central in the role of biology, however, is clearly emotional experience and expression. The degree to which writing can influence emotional states, emotional expression, and emotional reactions to ongoing or future stimuli will have implications for physiological processes.

Final comment on mechanisms. Although there is a desire for a clear answer and a tendency to reduce the results to a single mechanism, it is quite possible that the writing intervention involves many or all of the mechanisms reviewed here. The beneficial effects of structured expressive
writing may be due to the cumulative effects of many small changes, or there may be different mechanisms present in different people or different situations. Many studies examining mechanisms have primarily focused on only one potential mechanism, and found little or equivocal support. In contrast, a preferable method may rely on a more pluralistic approach to mediation, widely assessing the range of possible mechanisms that may occur in concert with one another within individuals, or differentially between individuals.

**New Applications and Future Directions**

Several new applications of the expressive writing intervention have expanded its utility and extended the potential reach of its administration. Expressive writing may have the potential to supplement mental and physical health care services in various formats, such as workbooks or self-administered manuals. A controlled trial conducted by Hockemeyer and Smyth (2002) supported both the feasibility and effectiveness of a multicomponent self-administered stress management workbook for patients with asthma that included written emotional disclosure as one of the three components. Another potential format for expressive writing is the Internet, a medium through which writing naturally occurs in great frequency (e. g., email, blogs, instant messaging). Interapy, or internet therapy, is a novel program developed by Alfred Lange and colleagues that utilizes structured writing through the internet (e. g., Lange, Schoutrop, Schrieken, & van de Ven, 2002). This procedure combines structured expressive writing with therapist feedback and instructions in the delivery of mental health services (Lange et al., 2002).

*New innovations that measure emotional responses to expressive writing.* There is a growing interest in using writing as a supplemental treatment intervention in patients with medical illness. Of particular concern is the potential for adverse reactions to the intervention, such as an increase in client distress (e. g., Smyth & Catley, 2002). Data suggests that individuals who write about a stressful or traumatic event experience greater distress during writing and after writing, as compared to participants who wrote about neutral topics (Smyth, 1998). Increases in distress and anxiety are common following completion of the intervention. Thus, it is important to understand how to help participants cope with this distress if writing is completed in an unmonitored setting. It is unclear whether there is a risk for sustained distress, particularly in clinical samples. The lack of evidence from effectiveness studies conducted outside of the laboratory environment elicits further concern for this important issue. Emotional responses to writing (e. g., engagement and habituation, emotion regulation) are thought to predict improvement although relatively little evidence exists to support this claim (cf., Sloan & Epstein, 2005).

Ambulatory real-time designs have offered new insights into participants’ emotional responses to the expressive writing intervention outside of the experimental context. Results from a study that utilized ecological momentary assessment (EMA) data (e. g., palm pilots) demonstrated that immediate distress was found following writing (as compared to
pre-writing), accompanied by increases in negative mood and decreases in positive mood. This dysphoric mood extended briefly outside of the laboratory setting, but dissipated within one to two hours. Importantly, there was no evidence of extreme or sustained distress at either the group or individual level. Participants showed a pattern of emotional habituation to negative emotion over the three writing sessions, such that the writing produced less negative affect and less of a decrease in positive affect (Smyth, Hockemeyer, et al., 2007).

These results suggest that although expressive writing may produce short-term distress, the intervention does not appear to pose great risk. Although distress is present following the intervention, it is short-lived and not of excessive magnitude. Furthermore, participants show a range of emotional habituation to both increased negative mood and decreased positive mood. Moderate habituation to negative mood predicts a greater likelihood of clinically significant improvements in disease. Either too little or too much habituation predicts outcomes that are less likely to be positive. Although speculative, these findings may reflect greater denial/avoidance and rumination/perseveration processes at the extremes of habituation.

Summary

In summary, individuals have a desire to express emotion and do so at very high rates. Expressive writing is one technique that facilitates this process, particularly under circumstances of constraint. Written emotional disclosure has produced benefits across a broad range of outcomes, in both healthy and diseased individuals, and among various cultures. The growing interest in the study of emotion, disclosure, and health in Japan have already yielded some promising results both in oral (Sato & Sakano, 2000; 2001) and written formats (Yogo, 2003; Yogo et al., 2004). Although considerable evidence supports the robust efficacy of the intervention, there is considerably less clarity regarding the underlying mechanisms responsible for the observed effects of the intervention. Various mechanisms responsible for these improvements have been proposed and examined, although more work still needs to be done in this area. Nonetheless, writing appears to be relatively safe to use for most people in most circumstances. Innovative designs, such as the use of ambulatory real-time methods, provide ecologically valid information about the effects of expressive writing in real-life settings. Recent work suggests that expressive writing techniques will be used in new settings and with new technologies, ensuring that written emotional disclosure is a topic that remains a vital and exciting research area.

References

of Behavioral Medicine, 27, 50–59.


Yogo, M. (2003). Writing about trauma on
emotion feelings and physical symptoms. Paper presented at the 3\textsuperscript{rd} International Conference on the (Non) Expression of Emotions in Health and Disease, Tilburg, The Netherlands.


要 約

筆記療法：開示筆記はどのように健康を促進するか

人は自らの情動を表現したいという願望を持っているが、その実施は困難であったり、社会的な問題を引き起こすことも多い。表現筆記とは、自らの感情を包み隠さず自由に書き表すこと指し、それは、制約下がある多くの状況においても行なうことができる。本論文は、筆記開示とその心身の健康に及ぼす効用についてこれまでの研究を概観していく。自らの感情を筆記することは、健康群でも臨床群でも心身の健康に効果をもたらすことが示されている。この効果は、文化を超えて、また幅広い参加者において繰り返し報告されている。本論文後半では、効果が生じるメカニズムと開示の弊害、そして新たな試みについて論じる。開示を行なった、一般に短期的なストレス反応が生じた後、長期的な改善効果が見られる。このような開示の効果のメカニズムについては、現在までに、複数の見解が提案され研究が進められている。近年では、筆記開示は新たなテクノロジーと組み合わされて、様々な場面で適用され始めていている。