A Meta-Analysis of Expressive Writing on Quality of Life and Posttraumatic Growth

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Abstract

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Inhibitory theory discusses how repressing negative thoughts or emotions can be detrimental to both physical and psychological health. Psychological dysfunction can have detrimental effects on an individual’s health, including unhealthy everyday life habits such as XXX. These unhealthy habits could lead to biological problems, especially immune system deficiencies and problems with neurotransmitters (Gangloff, Mayoral, & Vontrhon, 2016). Therefore, it is important to identify ways in which individuals can effectively expressive emotion, thereby improving both physical and psychological health.

Clinicians have considered and implemented many different ways for patients to successfully express their emotions. Verbalizing emotions has the capability to improve psychological well-being and improve psychological health, especially after experiencing a traumatic event (Smyth & Pennebaker, 2008). One type of therapeutic approach suggests that writing about negative emotional experiences leads to significant reduction in psychological distress (Pennebaker & Beall, 1986). Pennebaker (1997) has explored the use of expressive writing to elucidate the potential benefits of verbal expression of emotion. Pennebaker’s research suggests that writing about a traumatic event can help to increase psychological distress related to the event. Since Pennebaker started utilizing expressive writing, many variations have been adapted to examine the effectiveness of different types of expressive writing for different symptoms and psychopathology with very different groups of people. Over 200 studies have been conducted utilizing expressive writing in some form. While many studies have been conducted regarding this therapeutic approach, the effectiveness of expressive writing remains unclear.

The literature shows contradictory results of the effectiveness of this type of intervention, which may be a factor as to why clinicians hesitant to incorporate expressive writing into their treatment program. Henry, Schlegel, Talley, Molix, and Bettencourt (2010) found that expressive writing only benefited a rural population for those individuals surviving breast cancer. Lancaster, Klein, and Heifner (need year) found no significant evidence that expressive writing can be considered an effective approach. Expressive writing tasks fit well within the framework of different psychological interventions and can be adapted for treatment, which is why the literature includes many different studies looking at a multitude of variables. However, it is important to focus on individual variables in order to determine the effectiveness of expressive writing for specific diagnoses and psychopathology.

Posttraumatic Stress Disorder (PTSD) is a disorder involving reoccurring thoughts or experiences after a traumatic event or experience. The diagnosis is based on 20 symptoms structured into four different subsets. These subsets are as follows: re-experiencing, avoidance, negative alterations in cognition and mood, and arousal (Crespo & Mar Gomez, 2016). Research conducted on the effectiveness of expressive writing on PTSD symptoms has been less successful and shows outcomes that are not as effective as other studies (Sloan, Marx, & Greenberg, 2011). Thus, it is necessary to examine the effectiveness of expressive writing on posttraumatic growth. Posttraumatic growth is a positive experience after a traumatic event. Expressive writing has been shown to be an effective method for reducing psychological distress among those suffering from trauma (Sloan, Marx, Epstein, & Lexington, 2007). PTSD is becoming more prominent in society, so it is important to examine the effectiveness of an expressive writing intervention and look at how effective this approach is in improving symptoms. Speculation suggests that those meeting the criteria for moderate PTSD benefit more from expressive writing interventions as opposed to those with greater PTSD symptoms. A large sample size is needed to distinguish the effectiveness of expressive writing for those with moderate PTSD and severe PTSD. So, different studies will be looked at that measure posttraumatic growth, which can be defined as any positive change after a traumatic experience (Yilmaz & Zara, 2016). If particular studies are shown to benefit the patient and create a more positive lifestyle, then one can assume that it can be helpful in treating PTSD.

Quality of life is another variable, related to PTSD and psychology health, that is worth examining with expressive writing interventions. Quality of life is described as … measured by … Pennebaker and Graybeal (2001) suggested that expressive writing allows one to feel more connected with their surroundings. Furthermore, they explain that expressive writing allows people to see things in a different way and better understand themselves. By understanding the traumatic event, one is able to see things differently and perhaps look at the situation with a more positive mindset. The changes that occur after expressive writing may also allow one to find meaning in the traumatic event, thereby increasing the quality of life of that individual (Frankl, 1984).

The purpose of this meta-analysis is to examine studies utilizing expressive writing on quality of life and posttraumatic growth variables. As previously stated, research conducted on the effectiveness of expressive writing on PTSD symptoms has been shown to be less effective than XXX. Higher quality of life could be considered a type of posttraumatic growth. Due to discrepancies of the results of the wide range of studies conducted, it is important to understand just how effective expressive writing is for promoting positive change after a traumatic event and improving overall quality of life. Thus, a meta-analysis will allow a collected look at the use of expressive writing in these situations. This particular meta-analysis examines studies of patients with different types of psychopathology and medical diagnoses, so it would be hard to generalize the effectiveness of expressive writing for a particular diagnoses or group of individuals. However, the main focus is to examine posttraumatic growth and quality of life and the effect sizes related to different expressive writing interventions. However, posttraumatic growth and quality of life variable effect sizes utilizing expressive writing will not be looked at separately, since the two variables are inter-related.

**Methods**

For the studies used for this specific meta-analysis, a couple of different research designs were examined. Generally, groups were separated into an experimental and control group and then examined at different time points. Multiple data are collected after the expressive writing sessions at different time points in order to determine whether or not the effects are exhaustive. For this specific meta-analysis, ANOVAS were conducted to compare experimental and control groups at different time points for quality of life and posttraumatic growth outcome variables. Regression was also utilized to predict quality of life. One type of regression, moderation, was utilized to see if the time point and group participants were assigned to is moderated by the event severity. Finally, t-tests were utilized to compare the expressive writing and control group for each time point to determine whether or not they are statistically different. Table 1 has a rundown of the types of statistics utilized in these studies.

**Results**

*Figures 1* and *Figure 2* show average Eta Squared and Cohen’s d effect sizes for Eta Squared and Cohen’s d effect sizes. As previously stated, these figures are not separated by variable, just effect size. Table 1shows type of analysis, relevant numbers, type of effect size, and a 95% Confidence Interval (CI). Average Cohen’s d effect size is located in *Figure 2,* *M* = .18, *SD* = .19, 95% CI [.03 - .16]. This number indicates a small overall effect size. Average Eta Squared effect size is located in *Figure 1,* *M* = .07, *SD* = .12, 95% CI [.20 - .47]. This number indicates a small to medium average overall effect size. Some studies do appear to have higher effect sizes than others. Cohen’s d effect sizes seemed small for the most part. ANOVAS that measured posttraumatic growth and quality of life variables at different time points did not have above a small effect size. However, t-tests comparing the expressive writing and control groups for each of the time points did produce a medium Cohen’s d effect size, *d* = .54. Eta squared effect sizes ranged from no effect to a large effect, η2= .24. Comparing groups before and after the intervention seemed to produce the largest effect for each effect size. While the confidence intervals do not cross zero, the effect sizes seem modest at best. This intervention could be assumed to be somewhat effective when examining posttraumatic growth and quality of life variables.

**Discussion**

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*Figure 1.* Eta squared effect sizes for tests conducted utilizing expressive writing.

*Figure 2.* Cohen’s d effect sizes for tests conducted utilizing expressive writing.

Table 1*.*

*Analysis type, relevant numbers, type of effect size, effect size, and 95% CI.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Article Author | Type of Analysis | Relevant Numbers | Effect size type | Effect Size | Lower Limit | Upper Limit |
|  |  |  |  |  |  |  |
| Lancaster, Klein, & Heifner | ANOVA (time x condition) | *F*(1, 88) = 0.354, *p* = .55, λ = .996. | Eta Squared | 0 | 0 | 0.07 |
| Lancaster, Klein, & Heifner | ANOVA (time x event severity) | *F*(1, 86) = 0.510, *p* = .48, λ = .994 | Eta Squared | 0.01 | 0 | 0.07 |
| Lancaster, Klein, & Heifner | ANOVA | *F*(1, 88) = 28.532, *p* < .001, λ = .755 | Eta Squared | 0.24 | 0.1 | 0.38 |
| Lancaster, Klein, & Heifner | Moderation (Time and group moderated by event severity) | *F*(1, 86) = 2.196, *p* = .142, λ = .975. | Eta Squared | 0.02 | 0 | 0.12 |
| Lu, Zheng, Kagawa-Singer, & Loh | ANOVA (baseline to month three for quality of life) | *M =* 98.82, *S* = 23.25. *M* = 103.09, *SD* = 21.88 | Cohen's d | 0.19 | -0.27 | 0.64 |
| Lu, Zheng, Kagawa-Singer, & Loh | ANOVA (baseline to month three for posttraumatic growth | *M* = 72.00, *SD* = 23.05. *M* = 76.01, *SD* = 15.77 | Cohen's d | 0.21 | -0.25 | 0.66 |
| Lu, Zheng, Kagawa-Singer, & Loh | ANOVA (month three to month six for quality of life | *M* = 103.09, *SD* = 21.88. *M* = 102.71, *SD* = 23.50 | Cohen's d | 0.02 | -0.43 | 0.47 |
| Lu, Zheng, Kagawa-Singer, & Loh | ANOVA (month three to month six for posttraumatic growth | *M =* 76.01*, SD =* 15.77*. M* = 75.73, *SD* = 19.53 | Cohen's d | 0.02 | -0.43 | 0.47 |
| Lepore, Revenson, Roberts, Pranikoff, & Davey | Regression (quality of life variable) | *b* = 2.92, *p* = .20, *t = 1.30* | Cohen's d | 0.09 | -0.05 | -0.23 |
| Di Blasio, Camisasca, Caravita, Ionio, Milani, & Valtolina | t-test comparing expressive writing and control for each time point. | *M =* 5.04*, SD =* 2.17. *M =* 3.51*, SD* = 2.21*, N =* 57 (57 for EW group, control was 56) | Cohen's d | 0.54 | 0.26 | 0.82 |
| Meston, Lorenz, & Stephenson |  |  |  |  |  |  |
| Koopman, Ismailji, Holmes, Classen. Palesh, & Wales |  |  |  |  |  |  |
| Smyth, Kockmeyer, & Tulloch |  |  |  |  |  |  |