

The Benefits of Fictional Perspective Taking in Expressive Writing

Master's Thesis

Presented to

The Faculty of the Graduate School of Arts and Sciences
Brandeis University
Department of Psychology
Joseph Cunningham, Advisor

In Partial Fulfillment
of the Requirements for the Degree

Master of Arts
in
Psychology

by
Jacob Lehrhoff

May 2014

Copyright by
Jacob Lehrhoff

© 2014

Abstract

The benefits of fictional perspective taking in expressive writing

A thesis presented to the Department of Psychology

Graduate School of Arts and Sciences
Brandeis University
Waltham, Massachusetts

By Jacob Lehrhoff

The physical and psychological health benefits of disclosing personal trauma through writing are well established (Pennebaker & Beall, 1986) and have been seen in a variety of contexts, including when writing about imaginary traumas (Greenberg, Wortman, & Stone, 1996). Switching authorial voice perspective via pronoun use increases the positive effects of expressive writing (Campbell & Pennebaker, 2003), but no single perspective shows a greater effect than first-person (Seih, Chung, & Pennebaker, 2011). The current study examined whether disclosing emotions about a fictional, future event is an effective use of expressive writing, and whether disclosing from multiple first-person perspectives enhances the positive effect of such exercises. College students (n=53, female=44) were randomly assigned to write from a single first-person perspective (n=19), multiple first-person perspectives (n=17), or to a control group (n=17). The writing topic for experimental groups was rejection by a perspective employer, which was found to be the second most salient fear among college students (Fazackerley, 2004). Physical and psychological health questionnaires were expected to reflect improved wellbeing in experimental participants relative to controls. Results did not support expressive writing as an effective

method for coping with future fears and are discussed in light of other research on expressive and creative writing.

TABLE OF CONTENTS

I.	List of Tables.....	vi
II.	List of Figures.....	vii
III.	Introduction.....	1
IV.	Method.....	6
V.	Results.....	11
VI.	Discussion.....	17
VII.	Appendix A: Tables.....	25
VIII.	Appendix B: Figures.....	29
IX.	References.....	37

LIST OF TABLES

1. Significance of Group after controlling for baseline scores
2. Contrast estimates between the experimental groups and the control group after controlling for baseline scores
3. Contrast estimates between the first-person group and the switching first-person group after controlling for baseline scores.

LIST OF FIGURES

1. Estimated marginal means of Stress at baseline and follow-up for each group
2. Estimated marginal means of Miscellaneous Symptoms at baseline and follow-up
3. Estimated marginal means of role limitations attributable to physical health at baseline and follow-up
4. Estimated marginal means of role limitations attributable to mental health at baseline and follow-up
5. Estimated marginal means of health perception at baseline and follow-up
6. Estimated marginal means of social functioning at baseline and follow-up
7. Estimated marginal means of bodily pain at baseline and follow-up

Introduction

It has long been understood that failure to disclose traumatic events is associated with an increased incidence of health problems (Pennebaker & Hoover, 1986). Expressive writing is an effective method for disclosure, effecting short- and long-term improvements in psychological and physical health across a range of symptoms, conditions and populations. The effectiveness of expressive writing has been seen across an array of traumas, from such devastating traumas as rape and sexual assault (Batten, Follette, Hall, & Palm, 2002) to health related traumas such as a cancer diagnosis (Baker, 2009), and even to such common traumas as going away to college (J. W. Pennebaker, Colder, & Sharp, 1990) and experiencing a romantic breakup (Lepore & Greenberg, 2002). Expressive writing even affects health benefits when writing about intensely positive experiences (Burton & King, 2004). Furthermore, expressive writing is not exclusive to traumas, as it has also been shown to be effective when focused on stressors. Hudson and Day (2012) demonstrated that an expressive writing paradigm is an effective method for current or retired athletes to confront the stress of competition, problem solve, and manage their emotions.

The procedure of expressive writing was first demonstrated by Pennebaker and Beall (1986). Participants wrote about facts associated with traumatic events, feelings associated with traumatic events, or both. The task increased short-term physiological arousal, but writing about the emotions associated with a traumatic event or a combination of the emotions and facts demonstrated improved long-term health outcomes after four months. Interestingly, those who only wrote about the facts of a traumatic experience were similar to control subjects on most health measures.

While the robust effects of expressive writing are well replicated, the process by which it offers health benefits is unclear. Disclosure of trauma may improve coping by allowing for catharsis (Scheff, 1979). This theory is supported by a finding in a meta-analysis by Frattaroli (2006) suggesting that there is a greater effect in therapeutic writing if the trauma has not been previously disclosed. Interestingly, the same meta-analysis found that greater health gains were found in studies that did not collect the participants' writing samples; a private catharsis seems to be the most effective.

Some evidence exists suggesting that it is the creative, reflective space that writing affords that accounts for expressive writing's benefits. Robinson (2000) describes writing as fitting within the work of Winnicott (1971) on transitional space, the area between fantasy and reality where analysis, creativity and play can occur. Writing "creates a reflecting space which allows us to conceptualize our experience (Robinson, 2000, p. 80). Smyth, True, and Souto (2001) found evidence for the importance of creativity. In a traditional expressive writing paradigm of a control group and an expressive writing group, a third group was added who were instructed to list their thoughts, feelings, and sensations. The listing group did not differ from the control group on any measure, suggesting that narrative formation may be required to achieve the health benefits of expressive writing.

To help further uncover what qualities of writing may elicit the health benefits that are seen as a result of expressive writing, James Pennebaker developed software called Linguistic Inquiry and Word Count (LIWC). LIWC analysis demonstrated that participants who utilized more emotion words experienced greater health gains (Pennebaker, 1993), adding further evidence to the cathartic explanation for the function of expressive writing.

While the expressive writing paradigm is effective for coping with strong emotions concerning an experienced trauma, little attention has been paid to managing the strong emotions of our concerns for the future. Studies of affective forecasting, the act of predicting one's own emotional state in the future, show that people regularly predict negative events to have an disproportionately intense and long-lasting impact on emotional states as compared to their actual subsequent experience of those negative events (Wilson & Gilbert, 2005). This theory has been applied to a wide range of emotional events, from positive events such as winning the lottery to negative events such as losing a football match (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000), being rejected by a prospective employer, or losing a child (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998).

Of these negative events, rejection from a prospective employer is particularly salient for college students. A 2004 survey found that worry about finding a job after college is the second most common concern among college students, with worry about graduating being the most common (Fazackerley, 2004). However, the college environment offers ample opportunity for students to voice their emotions about academic concerns, and expressive writing is most effective when the trauma has not been disclosed. Also, worry about finding a job nicely parallels an experienced trauma among college students that is often studied through an expressive writing paradigm—the trauma of going to college. Both scenarios involve an abrupt change into a new phase of life and the fear of starting that phase successfully. Given the strong emotions associated with struggling to find a job after graduation, expressive writing may be able to aid in students' affective forecasting and coping with this worry.

Blending the importance of the creative narrative in expressive writing with the act of writing about future events requires the writing of fiction. This was touched upon in a study on

imaginary trauma. Greenberg et al. (1996) had participants who had experienced trauma write about an imaginary traumatic experience. They found that health benefits were seen whether the topic of writing was real or imaginary. A possible explanation is that writing about another's trauma is emotionally relevant to one's own history and allows one to indirectly express rooted emotions.

When writing fiction, an important consideration is the perspective. Interestingly, perspective is also an important moderator in expressive writing. LIWC analysis was used to demonstrate the effect of pronoun use in expressive writing, with switching pronoun use being associated with greater improvements in health (Campbell & Pennebaker, 2003). Jin (2005) suggested that switching pronoun use, particularly from first- to second- to third-person, might create distance from a traumatic event, thereby aiding in the healing process. Jin (2005) described distancing as the act of processing and storing an event from an observer's perspective, or analyzing one's own life from a third-person perspective. This distancing paradigm was successfully replicated by Seih, Lin, Huang, Peng, and Huang (2008).

Despite the benefit of switching pronoun use, ample evidence indicates the importance of writing from the first-person perspective. Seih et al. (2011) found that writing from an exclusively first-person perspective is correlated with greater health benefits than third person, and that staying within a single perspective is correlated with the use of more emotion words. Writers who use a first-person perspective are also more cognitively engaged in their task than those in a third-person perspective (Andersson & Conley, 2013).

Complicating best practices in expressive writing, other studies have shown the advantage of maintaining a third-person perspective. After angering or depressing events, assuming an observer's perspective to recall the event produces better health outcomes (Ayduk

& Kross, 2008; Kross & Ayduk, 2008). One possible explanation for this finding comes from a study differentiating the “what” of depression from the “why” of depressed feelings. Kross, Ayduk, and Mischel (2005) found that writers who focus on why they feel a given emotion rather than just what the emotion is saw the greatest health gains. A third-person perspective may allow for greater processing of why participants feel certain emotions.

Given the discordance regarding which design elicits the greatest positive health outcomes from expressive writing, creating a fictional narrative about a future event allows for a more creative approach. Rather than switching pronoun use to change perspective and thus dropping the first-person perspective, fiction allows writers to distance themselves from trauma more cognitively by depicting the trauma from the perspective of varied characters in their fictional account, all expressed from within a first-person perspective. Writers are forced to consider all the emotions surrounding the trauma, not just their own, and can begin to comprehend their own feelings within the larger narrative.

The current study hypothesizes that an expressive writing program focused on the hypothetical future event of being rejected by a prospective employer will demonstrate greater health benefits than a control group. Furthermore, distancing oneself from said trauma by switching perspectives between characters involved in the story will demonstrate greater health benefits than using a self-referencing first-person perspective throughout the writing sessions.

Method

Participants

54 students (45 female) between the ages of 18 and 22 were recruited from psychology classes at Brandeis University. Students received two hours of experimental credit toward their class requirement or received extra credit for their participation. One student was unable to complete the writing portion of the study within the expected time frame and was removed. Participants were randomly assigned to the first-person group (all three writing sessions are from the writer's first-person perspective, Group 1, n=19), the switching first-person group (all three sessions are first-person, but the first session is the participant's perspective; the second and third are from the perspective of other characters, Group 2, n=17), or the control group (Group 3, n=17).

Procedure

The expressive writing protocol is adapted from Pennebaker's design (Pennebaker, 1993; Pennebaker et al., 1990). Upon arrival to the lab, participants completed the psychological and physical measures listed in the materials section to determine a baseline. They then completed their first fifteen-minute writing session. Participants returned twice more within a 5-day window for their second and third writing sessions. Finally, participants returned one month later to complete the same measures they completed prior to their first writing session.

After completing the follow-up assessment, participants were thanked for their contributions and provided with the telephone numbers of the experimenter and the student counseling center to use if they experience any adverse reactions from their participation in the

study. Participants were also informed of the study's hypotheses and invited to speak with the experimenter in private to discuss their reactions to the study. Most participants engaged in discussions with the research team upon completion.

Participant Instructions

After completing the pretest questionnaires described in the *Materials* section, participants Groups 1 and 2 received the following prompt:

Your imaginative and emotional capacities will now be tested. People who are imaginative and really in touch with their emotions generally perform well on this task. The goal of this task is for you to imagine the traumatic event of *failing an interview* for a job or internship that you hoped to get. Let your imagination carry you away from this room and to the interview. Imagine the interview as vividly and fully as you can, along with all the emotions you feel concerning your poor performance and rejection for the job/internship. Write the entire scene from your own first-person perspective.

The second session of writing is identical to the first for Group 1, but for Group 2, the second day's prompt read:

Today's session is similar to the first session, except this time you will be writing the same scene from the perspective of the *interviewer*. You now sit on the opposite side of the desk and you are in control of the interview you created yesterday. Let your imagination carry you away from this room and to the interview. Imagine the interview

as vividly as fully as you can, along with all the emotions you feel concerning your rejection of the applicant (*you* in session one). Remember: today you are the *interviewer*.

The third session concerned disclosing to a confidant what happened in the interview.

Group 1's prompt read:

The final writing session concerns disclosing to a confidant (a friend, a family member, or a significant other) that you failed the interview and didn't get the job or internship. Let your imagination carry you away from this room and to the scene of you disclosing the news to your confidant. Focus on telling your confidant how you feel and how it feels to share those emotions.

Group 2's prompt for session three read:

The final writing session concerns disclosing to a confidant (a friend, a family member, or a significant other) that you failed the interview and didn't get the job or internship. However, today you are taking the perspective of the *confidant*. You are listening to your original character describe what happened and how they feel. Let your imagination carry you away from this room and to the scene of you (from the first session) disclosing the news to your confidant. Focus on including all the emotions that your original character shares, and how the confidant feels to hear it. Remember: today you are the *confidant*.

The control group's prompt for day one/two/three read:

Your task is to describe (your bedroom/your shoes/the room you are currently in) as accurately as possible. Do not include any emotion words in your descriptions. Instead, focus on the physical objects being described.

Materials

Perceived stress scale. The Sheldon Cohen Perceived Stress Scale (PSS) is a 10-item questionnaire that measures the degree to which situations are deemed to be stressful. Questions are on a five point Likert scale and focus on how unpredictable, uncontrollable, and overloaded participants find their lives. Scores can range from 0 to 40, with high scores representing greater amounts of stress. Four positively focused items were reverse coded (“In the last month, how often have you felt confident about your ability to handle your personal problems,” “In the last month, how often have you felt that things were going your way,” “In the last month, how often have you been able to control irritations in your life,” and “In the last month, how often have you felt that you were on top of things?”). The 10-item PSS has been shown to be a reliable and valid measure of stress (Cohen, Kamarck, & Mermelstein, 1983).

Miscellaneous Symptom Scale. The Miscellaneous Symptom Scale is a 13-item self-reported health questionnaire derived from the Southern Methodist University Health Questionnaire Symptom Scale, as used by Watson and Pennebaker (1989), covering miscellaneous symptoms such as diarrhea, rash and headache. Each question allows participants to check “yes” or “no” to indicate whether each symptom was present in the previous month.

Health Status Questionnaire-12. The Health Status Questionnaire (HSQ-12) is a 12-item self-reported health status instrument available within the public domain. Questions concern

general health, activity restriction, and wellbeing. The HSQ-12 is a reliable and valid measure of health status with an internal consistence of .88 (Barry, Kaiser, & Atwood, 2007).

Results

The study hypothesized that both expressive writing groups (first-person and switching first-person) would outperform the control group on physical and mental health scores as measured at the one-month follow-up, controlling for baseline scores. Furthermore, it was hypothesized that the switching first-person group would outperform the first-person group. One-way Analyses of Covariance (ANCOVA) were used to examine the effects of group assignments on physical and mental health measures, controlling for baseline scores as a covariate. Overall, after controlling for baseline scores, no group differences were significant, nor were the contrasts between experimental groups and control group and between the first-person group and switching first-person group. Table 1 summarizes the ANCOVA results for group differences, Table 2 summarizes the contrast estimates between the experimental groups and the control group, and Table 3 summarizes the contrast estimates between the two experimental groups.

Sheldon Cohen Perceived Stress Scale

At baseline, PSS scores ranged from 3 to 32 ($M=17.17$, $SD=6.42$), and at 1-month follow-up they ranged from 2 to 28 ($M=16.50$, $SD=6.72$). Controlling for baseline scores, one-way ANCOVA found no group differences in perceived stress ($F(2,46)=.365$, $p=.696$, partial $\eta^2=.016$). Figure 1 illustrates the similar patterns seen in the three groups across the two time points. Planned contrast found that the experimental groups, on average outperformed the control group by .995, controlling for baseline stress scores ($F(1,46)=.505$, $p=.481$). Furthermore, controlling for baseline stress, on average the first-person group outperformed the switching perspective group with a contrast estimate of .728 ($F(1,46)=.197$, $p=.659$). Selecting only

participants over 19 years (while class year was not obtained, job-related worries may be more salient for older students, as they are likely closer to graduation; $n=17$), there was still no group differences ($F(2,13)=.460, p=.641, \text{partial } \eta^2=.066$). Although group differences were not significant, for students 20 years old and older, group explained 6.6% of the variation in stress.

Miscellaneous Symptoms

With a possible maximum score of 13, Miscellaneous Symptoms ranged from 0 to 12 at baseline ($M=3.15, SD=2.56$) and 0 to 10 at 1-month follow-up ($M=2.66, SD=2.29$). Controlling for baseline scores, one-way ANCOVA found no group differences in miscellaneous health symptoms ($F(2,49)=1.054, p=.356, \text{partial } \eta^2=.041$). Group differences can explain about 4% of the variance in miscellaneous symptoms. This is a small effect size. Experimental groups improved on average by .654 symptoms, controlling for baseline miscellaneous symptoms ($F(1,49)=1.764, p=.190$). Again, when controlling for baseline miscellaneous symptoms, the first-person group scored slightly better than the switching first-person group with on average .296 fewer symptoms ($F(1,49)=.276, p=.602$). Differential patterns from baseline to follow-up for the three groups can be seen in Figure 2. For older students ($\text{age}>19, n=19$), group was not a significant predictor of miscellaneous symptoms, controlling for baseline scores ($F(2,14)=1.044, p=.378, \text{partial } \eta^2=.130$); however, group explained 13% of the variance, a medium-large effect size. Although the groups differed, they were not significant and may have been due to chance.

Health Status Questionnaire

Of the 12-item HSQ-12, two sets of three questions were averaged to create Physical Functioning and Mental Health scales. Other items were analyzed individually, each representing a different aspect of physical health. Possible scores for all items ranged from 0 to 100, with higher scores representing better health. With the exception of Mental Health and Role

Limitations Attributable to Mental Health Issues (RL-MH), the other items were combined to create an overall physical health scale. At baseline, overall physical health scores ranged from 41.39 to 100 with $M=78.32$ ($SD=13.13$). Follow-up scores ranged from 39.17 to 100, with $M=76.93$ ($SD=13.35$). Controlling for baseline scores, there were no group differences in overall physical health ($F(2,48)=.437$, $p=.649$, partial $\eta^2=.018$). For older students (age>19, n=18), there was still no difference in overall physical health ($F(2,14)=.338$, $p=.719$, partial $\eta^2=.046$), though for the older participants, 4.6% of the variance was attributable to group differences.

Physical functioning ($M_{baseline}=96.54$, $SD_{baseline}=10.00$, $M_{follow-up}=93.08$, $SD_{follow-up}=17.73$) did not vary between groups, controlling for baseline scores ($F(2,48)=.558$, $p=.576$, partial $\eta^2=.023$). Contrary to expectations, controlling for baseline scores, the experimental groups did not significantly outperform the control group, with the control group scoring on average 2.70 points higher ($F(1,48)=.272$, $p=.604$, partial $\eta^2=.006$). However, controlling for baseline scores, the switching first-person group outperformed the first-person group by 5.40 points, though this too was not statistically significant ($F(1,48)=.830$, $p=.367$, partial $\eta^2=.017$).

Role limitations attributable to physical health (RL-PH) ranged from 10 to 100 at both baseline and follow-up ($M_{baseline}=83.85$, $SD_{baseline}=24.17$, $M_{follow-up}=84.81$, $SD_{follow-up}=26.60$). Trends from baseline to follow-up can be seen in Figure 3, with first-person group scores dropping from $M_{baseline}=87.22$ to $M_{follow-up}=80.00$, switching first-person rising from $M_{baseline}=83.24$ to $M_{follow-up}=93.82$, and control group holding nearly steady at $M_{baseline}=80.88$ and $M_{follow-up}=80.00$. Controlling for baseline scores, group differences in RL-PH were not significant ($F(2,48)=1.602$, $p=.212$, partial $\eta^2=.063$). This is a small-to-medium effect size. Similarly, ANCOVA contrasts found that controlling for baseline scores, the experimental groups outperformed the control groups by 6.20 points ($F(1,48)=.624$, $p=.433$, partial $\eta^2=.013$), and the

switching first-person group outperformed the first-person group by 14.48 points ($F(1,48)=2.606, p=.113, \text{partial } \eta^2=.051$). Though these analyses were not significant, they did follow the expected trends.

Unlike RL-PH, role limitation attributable to mental health (RL-MH) showed opposite trends among the experimental groups, with the first-person group outperforming the switching first-person group (see Figure 4). As with RL-PH, group differences were not significant after controlling for baseline scores ($F(2,48)=.329, p=.721, \text{partial } \eta^2=.014$). Again, controlling for baseline scores, ANCOVA contrasts were not significant, finding that the experimental groups scored 5.81 points higher than the control group ($F(1,48)=.620, p=.435, \text{partial } \eta^2=.013$) and the first-person group scored 1.48 points higher than the switching first-person group, a marginal difference ($F(1,48)=.031, p=.861, \text{partial } \eta^2=.001$).

Health perception ranged from 0 to 100 at both baseline ($M=80.85, SD=19.99$) and follow-up ($M=80.38, SD=19.46$). Trends from baseline to follow-up for all three groups were similar (Figure 5). Controlling for baseline scores, group differences were not significant ($F(2,48)=.481, p=.621, \text{partial } \eta^2=.020$). Similar to other measures, the experimental groups scored slightly higher in health perception at follow-up, controlling for baseline scores (contrast=2.55, $F(1,48)=.598, p=.443, \text{partial } \eta^2=.012$), and the first-person group scored marginally higher than the switching first-person group (contrast=2.27, $F(1,48)=.362, p=.550, \text{partial } \eta^2=.007$). Again, group differences were not more robust for the older participants (age>19, n=18, $F(2,14)=.041, p=.960, \text{partial } \eta^2=.006$).

Scores for social functioning ranged from 25 to 100 at both baseline ($M=71.84, SD=26.26$) and follow-up ($M=68.06, SD=22.37$). Social functioning trends did not follow the expected pattern (see Figure 6), with the control group outperforming the experimental group by

6.91 points, controlling for baseline scores ($F(1,48)=1.307, P=.259, \text{partial } \eta^2=.027$). However, the first-person group did score 3.36 points higher than the switching first-person group, controlling for baseline scores ($F(1,49)=.210, p=.649, \text{partial } \eta^2=.004$). As with the other measures, after controlling for baseline scores, group differences were not significant ($F(2,49)=.672, p=.512, \text{partial } \eta^2=.027$).

Interestingly, mixed-model analysis of variance found that bodily pain improved significantly across time ($F(1,50)=4.249, p=.045, \text{partial } \eta^2=.078$) with a mean of 72.78 at baseline ($SD=20.06$) and a mean of 78.49 at follow-up ($SD=20.23$). However, one-way ANCOVA found no differences across groups (see Figure 7) after controlling for baseline scores ($F(2,49)=.329, p=.721, \text{partial } \eta^2=.013$). Marginal differences were found between the experimental groups and control groups (contrast=2.83, $F(1,49)=.279, p=.600, \text{partial } \eta^2=.006$) and between the first-person group and switching first-person group (contrast=-3.891, $F(1,49)=.406, p=.527, \text{partial } \eta^2=.008$) after controlling for baseline scores. In line with previous results, group differences were not significant for the older subset of participants (age>19, n=18, $F(2,14)=.513, p=.610, \text{partial } \eta^2=.068$).

Energy ranged from 20 to 100 at baseline ($M=57.78, SD=21.86$) and 0 to 100 at follow-up ($M=53.58, SD=24.11$). Controlling for baseline scores, there were no group differences ($F(2,49)=.672, p=.512, \text{partial } \eta^2=.027$), but the experimental groups scored 6.91 points higher than the control group ($F(1,49)=1.178, p=.283, \text{partial } \eta^2=.023$). Differences between experimental groups were negligible, with the first-person group scoring 3.36 points higher than the switching first-person group ($F(1,49)=.210, p=.649, \text{partial } \eta^2=.004$).

Finally, mental health scores remained relatively stable across time ($M_{baseline}=62.41, SD_{baseline}=14.74, M_{follow-up}=60.00, SD_{follow-up}=18.58$). After controlling for baseline mental health

scores, there were no group differences ($F(2,49)=.262, p=.771, \text{partial } \eta^2=.011$), nor were there differences between the experimental groups and the control group (contrast=3.10, $F(1,49)=.506, p=.480, \text{partial } \eta^2=.010$) or between the two experimental groups (contrast=.572, $F(1,49)=.013, p=.909, \text{partial } \eta^2=.000$). Furthermore, these results held steady for the older subset of participants (age>19, n=18).

Discussion

The study aimed to add to the wealth of research by Pennebaker and colleagues on the uses of expressive writing by expanding it into the realm of fiction. We hypothesized that writing about a fictional but salient future worry would show the same positive physical and psychological health benefits that have been shown for personal trauma disclosure. While the results of the manipulation do not support this hypothesis, some findings align with other research in the field of expressive writing and will be discussed. In addition, failure to find an effect does not mean that such an effect does not exist. Potential explanations for the lack of support for the hypotheses that are related to the methodology of the study and the theory substantiating the hypotheses are explored below.

The experimental manipulation aimed to invoke participants' worries about their post-college job opportunities, based on evidence that such a worry is salient to the participants (Fazackerley, 2004). Although finding a job after college has been shown to be the second most common worry among college students, it may not be sufficiently salient or carry enough emotion for the disclosure of those feelings to result in measurable gains in physical or psychological health. Perhaps such worries and their related emotions intensify for students as graduation nears; however, the current study found no significant difference between the older and younger students. This may suggest that the current sample may not be well represented by Fazackerly's (2004) study on college worries.

Given that employment opportunities may not have been a salient enough worry, a future study might yoke participants to worries that are salient to them on an individual level. An

example of yoking fictional writing topics to personal trauma can be seen in research by Greenberg et al. (1996). Based on prompts, trauma victims wrote fictional accounts about the *type* of trauma that they had experienced. Given the effectiveness of the manipulation in that study, it is possible that the current study's manipulation may have only applied to those with a prior traumatic interview experience. Instead of one topic for all participants, prompts could have been more flexible, allowing participants to write about a topic for which they have considerable worry. Beyond measuring anxiety concerning job prospects, inquiring about previous negative interview experiences may have identified a subset of participants for which the manipulation would have been more salient and effective.

Another within-subject factor that merits consideration can be seen in a study on rumination. Sloan, Marx, Epstein, and Dobbs (2008) found that beneficial effects might not only derive from the topic of expressive writing, but also from the rumination style of the participant. Participants with a tendency to brood showed improvements in depression and anxiety, while those who wrote with a rumination style defined as “reflective pondering” did not show such improvements. These findings are surprising in light of studies on perseverating. Among participants with anxiety and depression disorders, higher perseverative thought was associated with negative affect, anxiety, and depression (Ruscio, Seitchik, Gentes, Jones, & Hallion, 2011). These findings together suggest that for expressive writing to be effective, topics must incite some anxiety and rumination, but not so much that it becomes debilitating, as is the case with perseverative thoughts. While perseverating would be unlikely in the current study, the prompts may have led participants to reflectively ponder, as it asked participants to insert themselves in an imaginary, hypothetical situation. If brooding is an important criterion for expressive writing

to be effective, in a future-worry expressive writing paradigm, the worry must be more significant and the prompt should encourage that style of writing.

While the salience of the potential trauma and the form of reflection upon it may help explain why the current study showed no group differences in physical and mental health, many studies also reported such null findings even when prompts investigated life events that drastically affect participants' lives. A study by Spera, Buhrfeind, and Pennebaker (1994) on coping with job loss found that expressive writing about being laid off had no effect on physical or mental health. It also had no effect on job-seeking behavior. However, group differences were seen in attitudes about employment. This suggests that the manipulation in the current study may have been a valid means to invoke a change in attitudes about post-college employment opportunities. Had we assessed anxiety and rumination about the prompt, changes in employment-related anxiety and rumination may have come to light, substantiating the benefits of expressing emotions regarding a salient worry about the future.

Another potential explanation for these null results could be that projecting about a future worry or trauma is simply not an effective use of expressive writing. However, a study by King (2001) found that writing about one's best possible self can be as effective as writing about one's most traumatic life event. Interestingly, participants who wrote about either a traumatic event or their best possible future selves made fewer health center visits over the next 5 months. This provides a sharp contrast to the current study. In the current study, participants wrote about a failing future self, and no effect was seen from the manipulation. The study by King's study (2001) measured health by number of health center visits after 5 months, while the current study measured participant health through questionnaires at a 1-month follow-up. Such a methodological difference can help explain the discrepant results.

Creative writing is implicit in prompts concerning future projections or worries about the future, but it appears that its effectiveness with regard to expressive writing is not consistent. In a study expanding the research on imaginary trauma writing, Yanko (2001) found evidence refuting the benefit of fictional writing. Experimental groups included writing about one's own trauma, writing about another's trauma, converting one's own trauma into a piece of fiction, and converting another's trauma into a piece of fiction. The only group that had fewer health center visits at a 1-month follow-up was the standard, own-trauma group. Not only did writing about another's trauma in a realistic way not show any effect, but those who converted their own or another's trauma into a piece of fiction showed no effect. Also worth noting, no group evidenced any psychological improvements. This study greatly undermines the possible effectiveness of creative writing in the field of expressive writing. While research by Smyth et al. (2001) highlights the importance of narrative form, considering the work as straight fiction has not been shown to be effective. This notion is reinforced by the current study, in that writing fiction about a future worry did not result in any changes in mental or physical health.

The ineffectiveness of fiction in expressive writing paradigms can also be seen in the lack of group differences between the first-person and switching first-person groups of the current study. As can be seen in Table 3, no consistent pattern of one group outperforming the other emerged. While there is much debate concerning the most effective perspective (or progression of perspectives) in expressive writing, perspective does not seem to make a significant difference when the expressive writing is fictional. This may inform future expressive writing studies, as perspectives beyond first-person ought to be grammatical changes rather than literal adoptions of perspectives of other characters in the trauma.

This isn't to say that there is no place for creative writing in coping with trauma. Much of the support for creative writing as a coping strategy comes not in the form of empirical study, but in anecdotal narrative of those who have used it. Ryan (2009) describes creative writing as a strategy she used to find herself after a loss of such magnitude that her instantaneous response was dissociation from the world and her own sense of identity. When her son suddenly died in a tragic accident, "...it was as if [she] stepped behind glass into room of white noise from which [she] could only observe" (Ryan, 2009, p. 530). A year after the trauma, she began a creative writing course with the intention to delve into the feelings that were too great to bear in the months following her son's death. Her writing became a means to confront the events and emotions from which she had dissociated at the time of the trauma. In each memory and emotion that she addressed in her creative writing, "...[She] was creating an illusion of repair of [her] fractured self" (Ryan, 2009, p. 534). While there were no measures or manipulations and a sample size of one, Ryan believes that creative writing allowed her to recreate herself in light of her trauma. Of note, this creative writing did not come in the form of visits to a lab and prescribed writing sessions, but instead came from a need to cope. Beyond the stark difference in topic from the current study, her intrinsic motivation and intentional purpose of writing sets her apart from the participants in the present study.

Similar uses of creative writing have been effective among cancer patients. While traditional expressive writing studies have shown the efficacy of the paradigm with this population (de Moor et al., 2002; Rosenberg et al., 2002; Walker, Nail, & Croyle, 1999), there is evidence that more extensive writing interventions can be effective. Baker (2009) discusses teaching creative writing classes to support emotional healing in an outpatient cancer support clinic. Her classes are free and open to anyone touched by cancer. With such an open door

policy, her patients attend and work through their feelings out of their own intrinsic desire to cope. She also never expects her patients to meet the criteria of 15-20 minutes a day for at least 4 days, all of which are focused specifically on the deepest emotions of the trauma. In fact, she found that many of her patients would shut down when their writing edged too close to their own histories.

Her non-empirical findings counter research on rumination by Sloan et al. (2008). She found that dwelling on emotions alone was counterproductive. However, avoiding emotional content altogether may also fail to provide a healing opportunity, to the extent that it perpetuates disassociation the traumatic experience. She adheres to Winnicott's idea of reflective space, and finds that her patients are able to show delight in their creations, even if they deal with difficult topics.

These examples bring to light explanations for the null results found in research by Yanko (2001) and in the current study. According to these narrative accounts, creative writing is effective when it comes from a natural search for understanding and coping, with a goal of integrating traumatic events into one's identity. The manipulation of being prescribed brief writing sessions about provided topics, no matter how salient they may be, cannot match the effectiveness of *choosing* to grapple with one's own altered identity after a trauma. Ruminating on a worry about the future alone wasn't shown to have any physical or mental health effects, but the examples of reinventing oneself through creative writing suggest that if a person is motivated to rewrite the possibility of an unflattering future and empower themselves, creative writing may be a viable option.

The current study had methodological limitations that may have contributed to the effectiveness of the manipulation. The sample size (n=53) was small for an expressive writing

study and offered low power. Statistically significant group differences would have been more likely with larger group sizes. Furthermore, while the study did include a control group that wrote about unemotional topics, unlike Yanko (2001) and Greenberg et al. (1996), no expressive writing control was included, that is, no group wrote about the standard expressive writing topic, “the most upsetting experience of your life.” By including this group, differences between the standard expressive writing paradigm and the unique aspects of the current study could have been addressed. Without such a group, results cannot be attributed to participant differences or manipulation differences. This is a significant limitation.

Further limitations include an absence of control measures. Individual differences in anxiety were assessed and controlled for in the perceived stress scale, but differences in anxiety specific to post-college job opportunities were not measured. This could have provided a useful covariate for analyses of all the measures, as well as a possible effect from baseline to follow-up beyond physical and mental health. Finally, writing was not analyzed for linguistic elements, which may have provided further evidence of an impact and opportunity for controls, particularly regarding use of emotional words and rumination style.

While there is much evidence that fiction writing is not an effective form in expressive writing paradigms, further study is necessary to better understand potential uses of creative writing. Future research on the use of fiction in expressive writing should limit participants to those who evidence high levels of worry about the future. Prompts should be tailored to those specific worries, and measures should assess more than physical and emotional health, such as pervasiveness of worry and style of rumination. Other studies may wish to consider creative writing outside of the expressive writing paradigm and standardize the type of intervention offered by Baker and Ryan. Possible subject pools could include creative writing and memoir

classes, and measures could assess both immediate changes in mood after writing and participants' self-concepts.

The current study aimed to expand the body of expressive writing research by studying the expression of a salient future worry through fictional writing. Despite a lack of significant results, the current study adds knowledge to the field by suggesting potential boundaries of effectiveness. While creative writing has been shown to be a useful coping strategy under certain circumstances, its empirical demonstration within the expressive writing paradigm was not supported in the present study. Perhaps such writing has to be more firmly grounded in the self of the author. Similarly, the effectiveness of expressive writing may be related to the salience of the topic for the writer. Finally, expressive writing does not necessarily effect mental or physical health improvements and therefore other more finely specified outcome measures may be useful to assess the potential effectiveness of an intervention.

Appendix A: Tables

Table 1

Dependent Variable	<i>F</i> (df)	<i>p</i>	Partial Eta ²
Stress	.365 (2,46)	.696	.016
Misc Symptoms	1.054 (2,49)	.356	.041
Overall Physical Health	.437 (2,48)	.649	.018
Physical Functioning	.558 (2,48)	.576	.023
Physical Role Limitation	1.602 (2,48)	.212	.063
MH Role Limitation	.329 (2,48)	.721	.014
Health Perception	.481 (2,48)	.621	.020
Social Functioning	.672 (2,49)	.512	.027
Bodily Pain	.329 (2,49)	.721	.013
Energy/Fatigue	.209 (2,49)	.812	.008
Mental Health	.262 (2,49)	.771	.011

Note: Significance of Group after controlling for baseline scores

Table 2

Dependent Variable	Contrast Estimate	<i>F</i> (df)	<i>p</i>	Partial Eta ²
Stress	-0.995	.505 (1,46)	.481	.011
Misc Symptoms	-.654	1.764 (1,49)	.190	.035
Overall Physical Health	1.040	.093 (1,48)	.762	.002
Physical Functioning	-2.699	.272 (1,48)	.604	.006
Physical Role Limitation	6.200	.624 (1,48)	.433	.013
MH Role Limitation	5.809	.620 (1,48)	.435	.013
Health Perception	2.547	.598 (1,48)	.443	.012
Social Functioning	-7.323	1.307 (1,48)	.259	.027
Bodily Pain	2.827	.279 (1,49)	.600	.006
Energy/Fatigue	6.905	.1178 (1,49)	.283	.023
Mental Health	3.103	.506 (1,49)	.480	.010

Note: Contrast estimates between the experimental groups and the control group after controlling for baseline scores. Positive contrasts represent a higher score for the experimental groups. With the exception of Stress, higher scores represent greater health.

Table 3

Dependent Variable	Contrast Estimate	<i>F</i> (df)	<i>p</i>	Partial Eta ²
Stress	-.728	.197 (1,46)	.659	.004
Misc Symptoms	-.296	.276 (1,49)	.602	.006
Overall Physical Health	-3.423	.783 (1,48)	.380	.016
Physical Functioning	-5.299	.830 (1,48)	.367	.017
Physical Role Limitation	-14.476	2.606 (1,48)	.113	.051
MH Role Limitation	1.476	.031 (1,48)	.861	.001
Health Perception	2.265	.362 (1,48)	.550	.007
Social Functioning	-1.572	.046 (1,48)	.831	.001
Bodily Pain	-3.891	.406 (1,49)	.527	.008
Energy/Fatigue	3.357	.210 (1,49)	.649	.004
Mental Health	.572	.013 (1,49)	.909	.000

Note: Contrast estimates between the first-person group and the switching first-person group after controlling for baseline scores. Positive contrasts represent a higher score for the first-person group. With the exception of Stress, higher scores represent greater health.

Appendix B: Figures

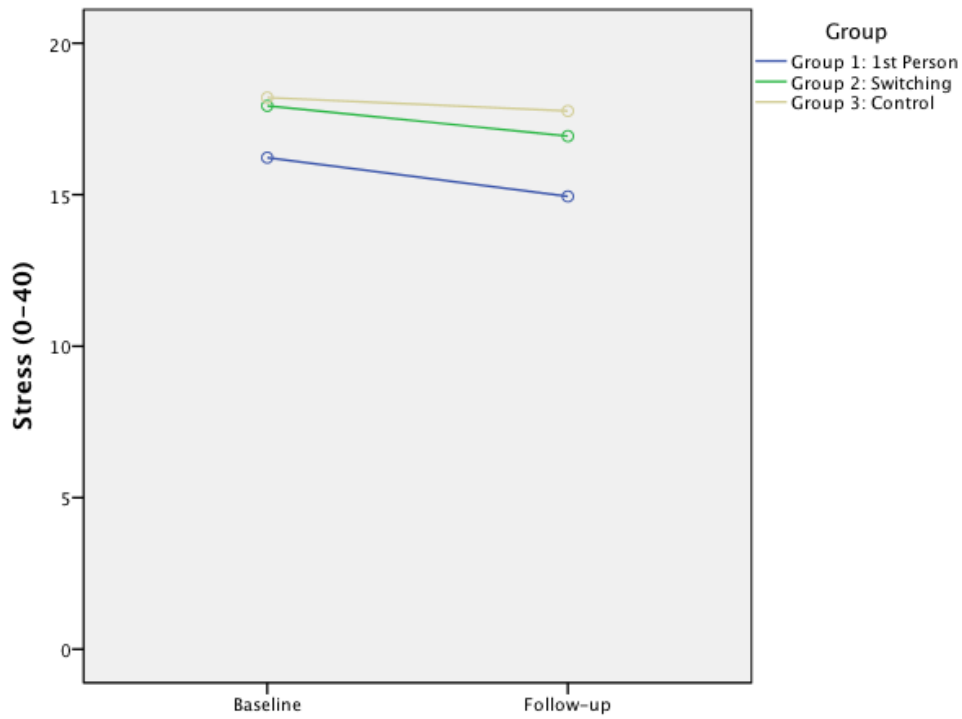


Figure 1. Estimated marginal means of Stress at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

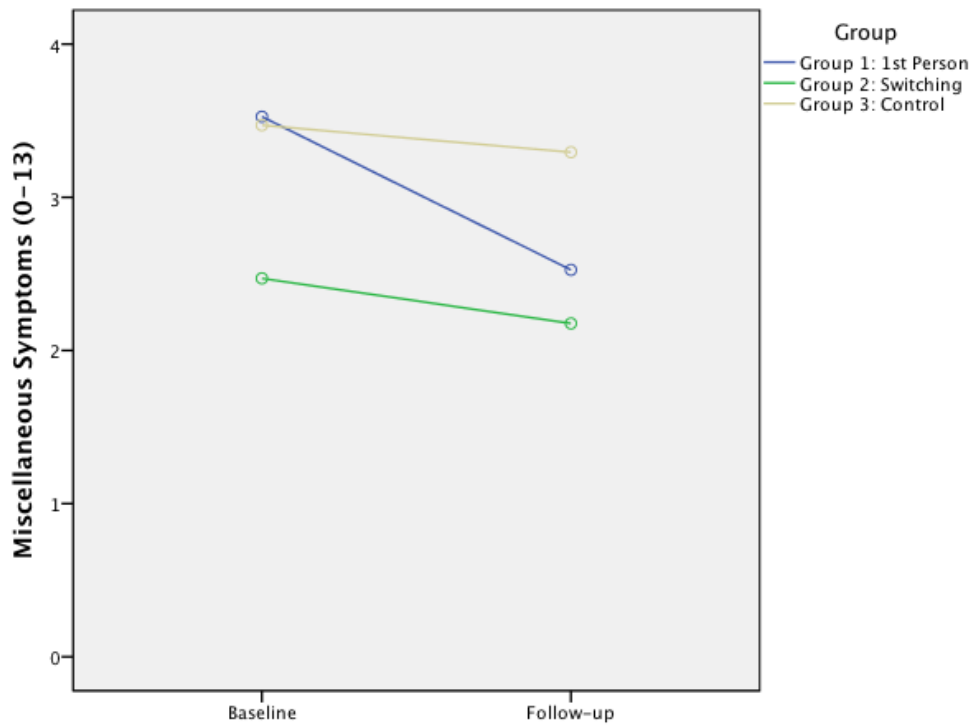


Figure 2. Estimated marginal means of Miscellaneous Symptoms at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

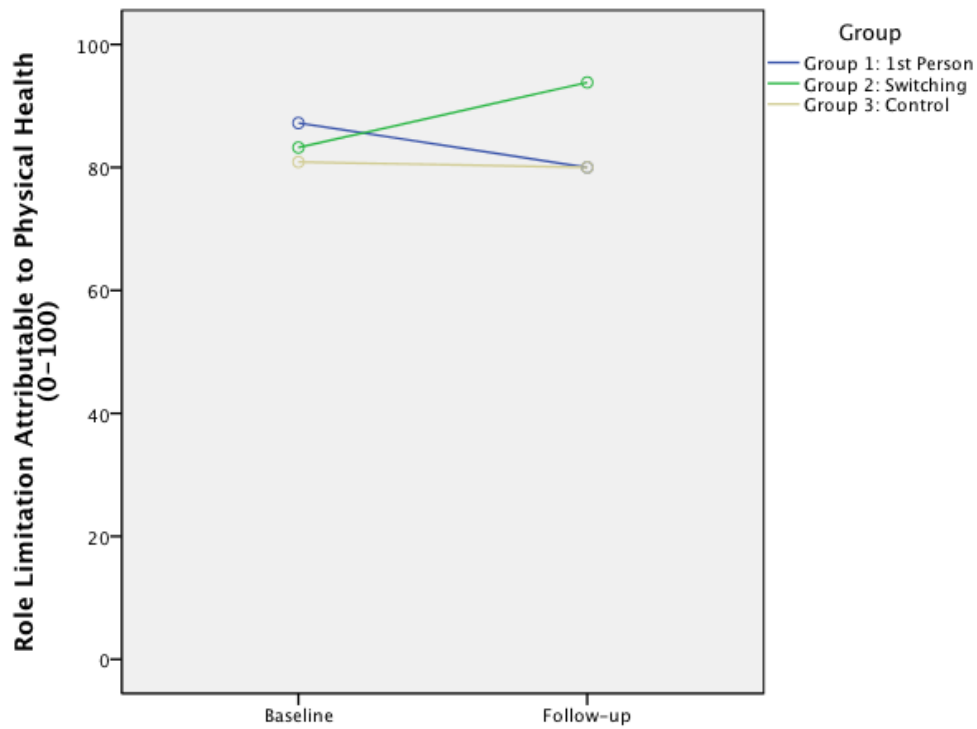


Figure 3. Estimated marginal means of role limitations attributable to physical health at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

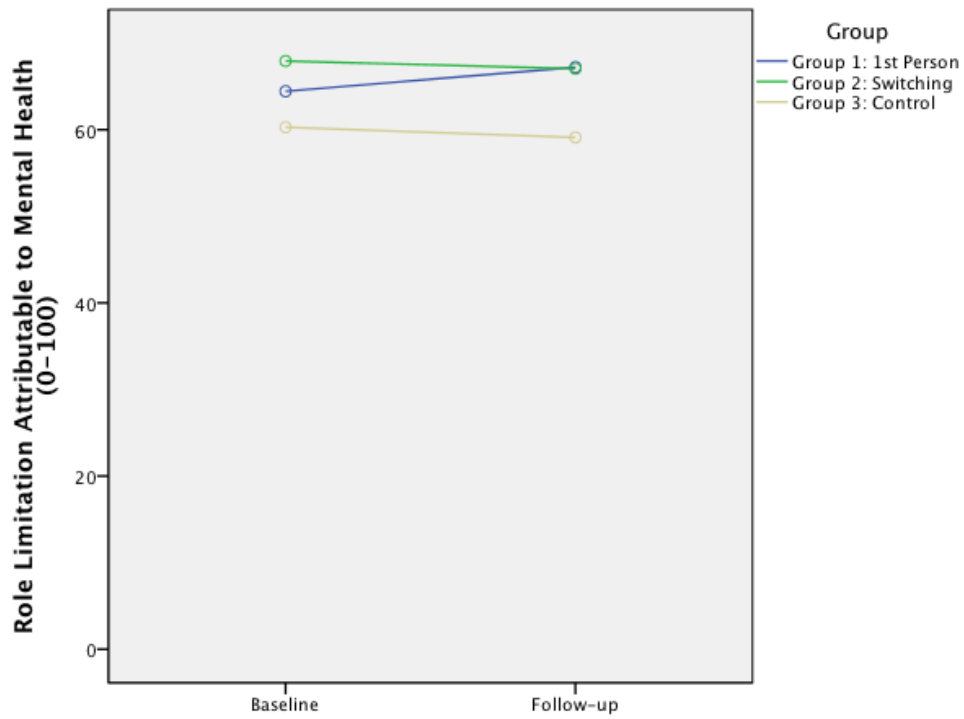


Figure 4. Estimated marginal means of role limitations attributable to mental health at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

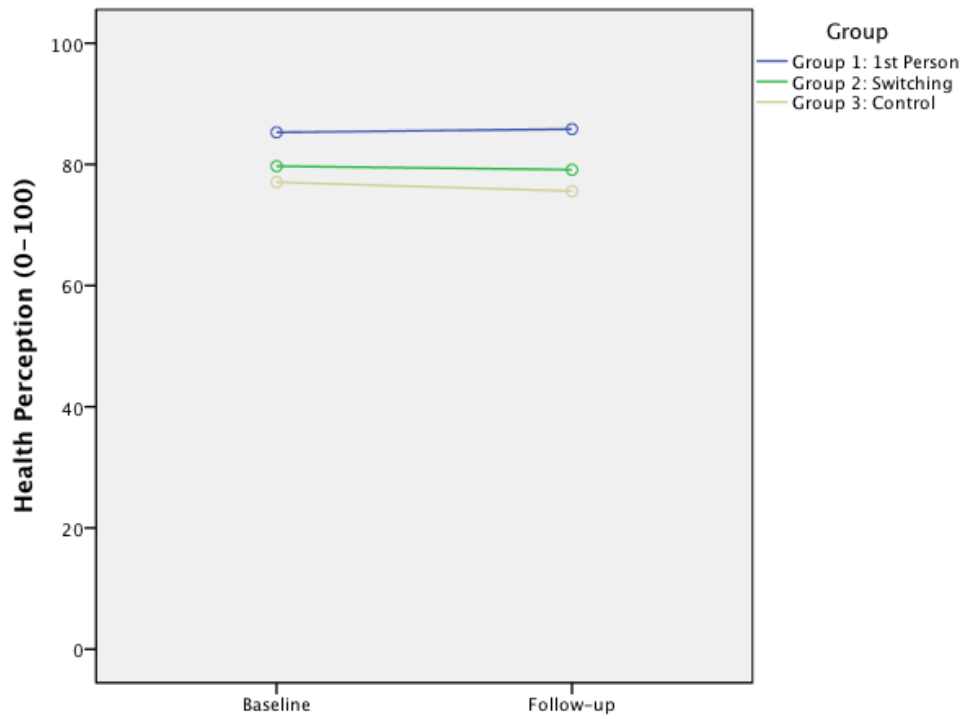


Figure 5. Estimated marginal means of health perception at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

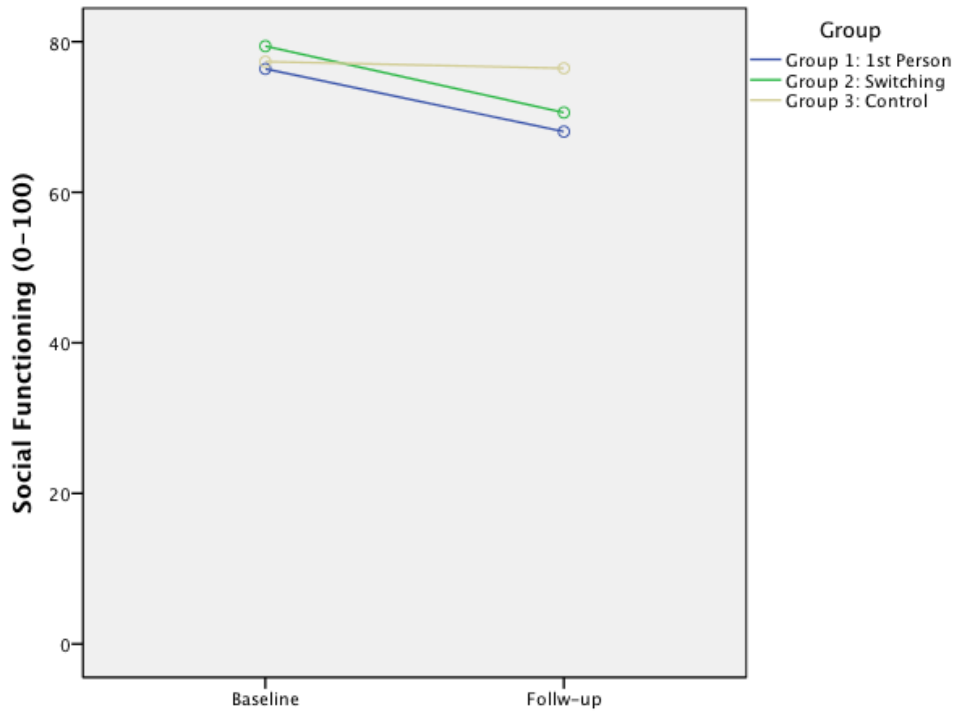


Figure 6. Estimated marginal means of social functioning at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

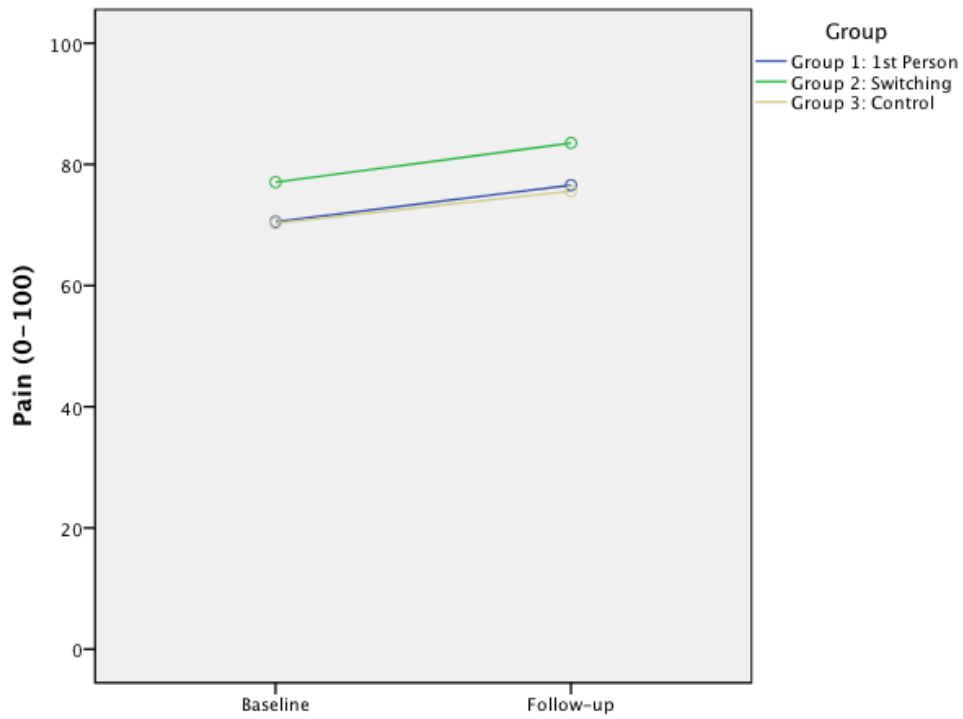


Figure 7. Estimated marginal means of bodily pain at baseline and follow-up for each group. Group differences at follow-up, controlling for baseline, are not significant.

References

- Andersson, M. A., & Conley, C. S. (2013). Optimizing the perceived benefits and health outcomes of writing about traumatic life events. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 29(1), 40-49. doi: 10.1002/smi.2423
- Ayduk, Ö., & Kross, E. (2008). Enhancing the pace of recovery: Self-distanced analysis of negative experiences reduces blood pressure reactivity. *Psychological Science*, 19, 229-231. doi: 10.1111/j.1467-9280.2008.02073.x
- Baker, S. (2009). Tell it slant: History, memory, and imagination in the healing writing workshop. *Traumatology*, 15(4), 15-23. doi: 10.1177/1534765609348912
- Barry, T. L., Kaiser, K. L., & Atwood, J. R. (2007). Reliability, validity, and scoring of the Health Status Questionnaire-12 version 2.0. *Journal of Nursing Measurement*, 15(1), 24-35.
- Batten, S. V., Follette, V. M., Hall, M. L. R., & Palm, K. M. (2002). Physical and psychological effects of written disclosure among sexual abuse survivors. *Behavior Therapy*, 33(1), 107.
- Burton, C. M., & King, L. A. (2004). The health benefits of writing about intensely positive experiences. *Journal of Research in Personality*, 38(2), 150. doi: 10.1016/S0092-6566(03)00058-8
- Campbell, R. S., & Pennebaker, J. W. (2003). The secret life of pronouns: Flexibility in writing style and physical health. *Psychological Science*, 14(1), 60-65. doi: 10.1111/1467-9280.01419
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of health and social behavior*, 385-396.
- de Moor, C., Sterner, J., Hall, M., Warneke, C., Gilani, Z., Amato, R., & Cohen, L. (2002). A pilot study of the effects of expressive writing on psychological and behavioral adjustment in patients enrolled in a Phase II trial of vaccine therapy for metastatic renal cell carcinoma. *Health Psychology*, 21(6), 615-619. doi: 10.1037/0278-6133.21.6.615
- Fazackerley, A. (2004). University life is a far cry from stereotype. *Times Higher Education Supplement*(1637), 10-11.
- Frattaroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin*, 132(6), 823-865. doi: 10.1037/0033-2909.132.6.823
- Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J., & Wheatley, T. P. (1998). Immune neglect: A source of durability bias in affective forecasting. *Journal of Personality and Social Psychology*, 75(3), 617-638. doi: 10.1037/0022-3514.75.3.617
- 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 & Social Psychology*, 71, 588-602.
- Hudson, J., & Day, M. C. (2012). Athletes' experiences of expressive writing about sports stressors. *Psychology of Sport & Exercise*, 13, 798-806. doi: 10.1016/j.psychsport.2012.05.005

- Jin, S. (2005). The dialectical effect of psychological displacement: A narrative analysis. *Taipei, China: National Science Council*.
- King, L. A. (2001). The health benefits of writing about life goals. *Personality and Social Psychology Bulletin*, 27, 798-807. doi: 10.1177/0146167201277003
- Kross, E., & Ayduk, O. (2008). Facilitating adaptive emotional analysis: Distinguishing distanced-analysis of depressive experiences from immersed-analysis and distraction. *Personality and Social Psychology Bulletin*, 34, 924-938. doi: 10.1177/0146167208315938
- Kross, E., Ayduk, O., & Mischel, W. (2005). When asking 'Why' does not hurt: Distinguishing rumination from reflective processing of negative emotions. *Psychological Science*, 16, 709-715. doi: 10.1111/j.1467-9280.2005.01600.x
- Lepore, S. J., & Greenberg, M. A. (2002). Mending broken hearts: Effects of expressive writing on mood, cognitive processing, social adjustment and health following a relationship breakup. *Psychology and Health*, 17, 547-560.
- Pennebaker, J., & Beall, S. (1986). Confronting a traumatic event toward an understanding of inhibition and disease. *J Abnorm Psychol*, 95, 274-281. doi: citeulike-article-id:2031095
- Pennebaker, J. W. (1993). Putting stress into words: Health, linguistic, and therapeutic implications. *Behaviour research and therapy*, 31, 539-548.
- Pennebaker, J. W., Colder, M., & Sharp, L. K. (1990). Accelerating the coping process. *Journal of Personality and Social Psychology*, 58, 528.
- Pennebaker, J. W., & Hoover, C. W. (1986). Inhibition and cognition: Toward an understanding of trauma and disease. *Consciousness and self-regulation*, 4, 107-136.
- Robinson, M. (2000). Writing well: health and the power to make images. *Medical humanities*, 26(2), 79-84.
- Rosenberg, H. J., Rosenberg, S. D., Ernstoff, M. S., Wolford, G. L., Amdur, R. J., Elshamy, M. R., . . . Pennebaker, J. W. (2002). Expressive disclosure and health outcomes in a prostate cancer population. *International Journal of Psychiatry in Medicine*, 32, 37-53. doi: 10.2190/AGPF-VB1G-U82E-AE8C
- Ruscio, A. M., Seitchik, A. E., Gentes, E. L., Jones, J. D., & Hallion, L. S. (2011). Perseverative thought: A robust predictor of response to emotional challenge in generalized anxiety disorder and major depressive disorder. *Behaviour research and therapy*, 49, 867-874. doi: 10.1016/j.brat.2011.10.001
- Ryan, J. L. (2009). Reweaving the self: Creative writing in response to tragedy. *Psychoanalytic Review*, 96, 529-538. doi: 10.1521/prev.2009.96.3.529
- Scheff, T. J. (1979). *Catharsis in healing, ritual, and drama*: Univ of California Press.
- Seih, Y. T., Chung, C. K., & Pennebaker, J. W. (2011). Experimental manipulations of perspective taking and perspective switching in expressive writing. *Cognition & Emotion*, 25, 926-938.
- Seih, Y. T., Lin, Y. C., Huang, C. L., Peng, C. W., & Huang, S. P. (2008). The benefits of psychological displacement in diary writing when using different pronouns. *British Journal of Health Psychology*, 13, 39-41. doi: 10.1348/135910707X250875
- Sloan, D. M., Marx, B. P., Epstein, E. M., & Dobbs, J. L. (2008). Expressive writing buffers against maladaptive rumination. *Emotion*, 8, 302-306. doi: 10.1037/1528-3542.8.2.302
- Smyth, J., True, N., & Souto, J. (2001). Effects of writing about traumatic experiences: The necessity for narrative structuring. *Journal of Social and Clinical Psychology*, 20, 161-172. doi: 10.1521/jscp.20.2.161.22266

- Spera, S. P., Buhrfeind, E. D., & Pennebaker, J. W. (1994). Expressive writing and coping with job loss. *Academy of Management Journal*, 37, 722-733. doi: 10.2307/256708
- Walker, B. L., Nail, L. M., & Croyle, R. T. (1999). *Does emotional expression make a difference in reactions to breast cancer?* Paper presented at the Oncology Nursing Forum.
- Watson, D., & Pennebaker, J. W. (1989). Health complaints, stress, and distress: exploring the central role of negative affectivity. *Psychological review*, 96, 234.
- Wilson, T. D., & Gilbert, D. T. (2005). Affective forecasting. *Current Directions in Psychological Science (Wiley-Blackwell)*, 14, 131-134. doi: 10.1111/j.0963-7214.2005.00355.x
- Wilson, T. D., Wheatley, T., Meyers, J. M., Gilbert, D. T., & Axson, D. (2000). Focalism: A source of durability bias in affective forecasting. *Journal of Personality & Social Psychology*, 78, 821-836. doi: 10.1037//0022-3514.78.5.821
- Winnicott, D. W. (1971). *Playing and reality*: Psychology Press.
- Yanko, J. I. (2001). *The effects of indirect versus direct disclosure of traumatic experience on psychological and physical well-being*. (61), ProQuest Information & Learning, US. Retrieved from <http://resources.library.brandeis.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2001-95008-191&site=ehost-live> Available from EBSCOhost psych database.