Writing about Betrayal Trauma: Examining Gender and Narrative Structure

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Abstract

In Pennebaker's writing paradigm, participants are instructed either to write about emotional events or neutral topics. Those assigned to the emotional writing condition typically display physical and psychological health improvements (Pennebaker, 1997; Smyth, 1998). Up until now, the writing paradigm has for the most part been applied to events which have been described as emotional but not specifically traumatic. Betrayal trauma is perpetrated by someone who is close to the victim and has been associated with various negative consequences. Sixty-five university undergraduates (51 female, 14 male) were randomly assigned to write either about a distressing interpersonal event they experienced during childhood or how they spent their time during the previous day. Over 50% of all participants reported having experienced at least one betrayal trauma, women reported more betrayal trauma than men, and betrayal trauma and health measures were found to be negatively related. While a main effect of writing on symptomatology reduction was not found, a significant gender by writing condition interaction emerged, which revealed that, in general, women in the trauma writing condition benefited more than men. Examination of the essays points to the importance of use of emotion words and coherence in predicting outcome.

Introduction

Pennebaker's Writing Paradigm
- Experimental design in which participants are instructed either to write about emotional events or neutral topics
- Those assigned to emotional writing condition typically display physical and psychological health improvements as compared to those in neutral condition (Pennebaker, 1997; Smyth, 1998)
- Presence of emotion words, and causal and insight words (presumably reflective of coherence) related to positive outcomes (e.g., Pennebaker & Francis, 1996; Pennebaker, 1997)

Betrayal Trauma Theory (Freyd, 1996; 2001)
- Distinguishes traumas on the basis of two event dimensions which may elicit different reactions: life-threat (e.g. major car accident; violent rape by a stranger) and social betrayal (e.g., abuse by a close other)
- Trauma high in betrayal is perpetrated by someone who is close to the victim and/or upon whom the victim is dependent
- Associated with impaired memory for trauma, presumably for purpose of preserving victim-perpetrator relationship, and various negative sequelae, including dissociation, depression, anxiety and physical ailments (e.g., Freyd, Klest & Allard, 2004)

Objectives
- *Primary goal:* to test generalizability of emotional writing to betrayal trauma
    - Up until now, Pennebaker's writing paradigm has been mostly applied to emotional but not necessarily traumatic events
    - Those few studies studying writing about traumatic experiences have only involved one-time non-complex traumas low in betrayal
- *Secondary goal:* to investigate mechanism behind writing phenomenon by elucidating essay characteristics associated with positive outcomes
    - While number of emotion words has been associated with positive outcomes, the relationship with causal and insight words is less clear (e.g., Pennebaker & Francis 1996)
    - Global ratings of coherence may be more valid

Method

Participants
- 65 (51 female, 14 male) physically symptomatic undergraduates recruited from psychology department Human Subjects Pool, and compensated with choice of partial course credit or $7
- Demographics (representative of UO undergraduate population):
  - M age = 19.94 years (SD = 3.86) and mostly (94.4%) single
  - 67 (93.1%) Caucasian; 2 (2.8%) each Asian, African American, Hispanic, Pacific Islander; and 1 (1.4%) American Indian

Assessments
- Trauma assessed at pretest using Brief Betrayal Trauma Survey (Freyd & Goldberg, 2004; see http://dynamic.uoregon.edu/~jjf/bbts/ for copies of the measure and suggested categorization of items into High, Medium and Low Betrayal).
- Psychological health assessed at pre and posttest with Trauma Symptom Checklist 40 (TSC; Elliott & Briere, 1992)
  - Includes overall symptom score and 6 subscales (depression, dissociation, anxiety, sleep difficulties, sexual problems, post sexual abuse trauma)
  - Time-bound so that participants were instructed to report frequency of symptoms during past 2 weeks

Procedures
- Random assignment to intervention of 2 x 20-minute writing assignments one week apart
  - Group 1: most distressing interpersonal childhood experience (n = 33)
  - Group 2: how you spent your time yesterday (n = 32)
- Completed posttest one month following second writing session

Content Analysis of Essays
- Counted number of emotion and coherence related words using Pennebaker's Linguistic Inquiry and Word Count computer program (Pennebaker, Francis & Booth, 2001) – see Table 1 for examples of words counted
- Rated coherence using Global Ratings of Essays About Trauma (GREAT) code (Klest & Freyd, 2004)
- Changes in LIWC word frequencies and GREAT ratings from 1st to 2nd writings used as predictor variables in regression analyses predicting symptom scores at posttest

Table 1. Examples of words in LIWC dimensions.

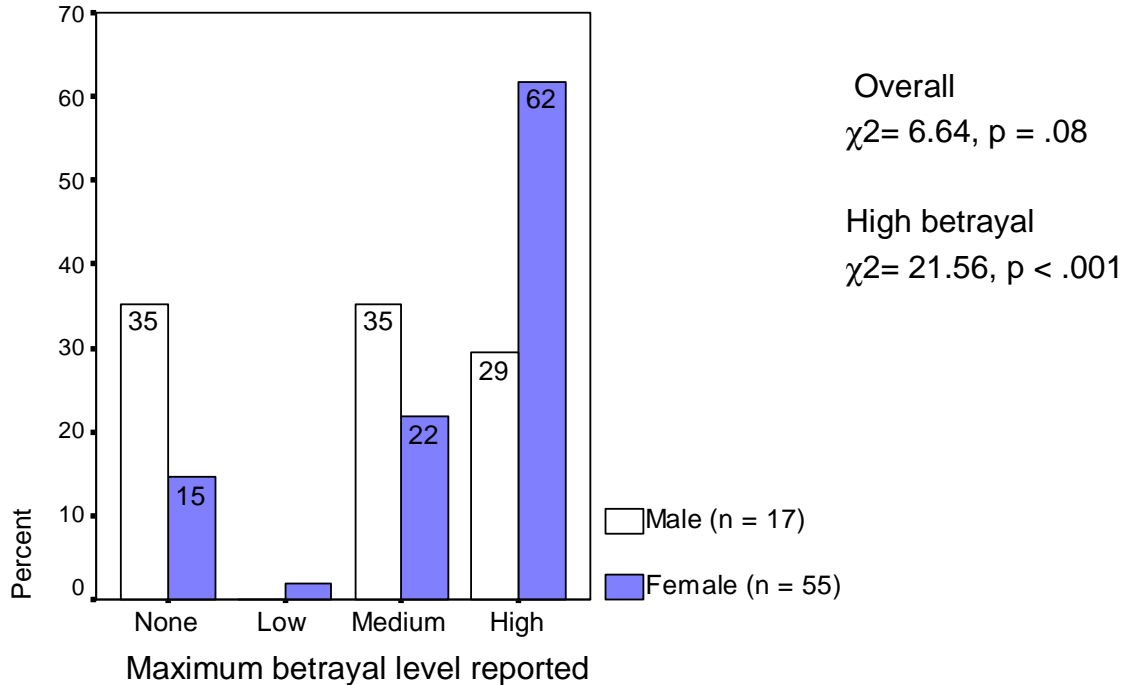| Word Dimension	Examples
Affective or Emotional Processes	
Positive Emotions	happy, pretty, good
Anxiety or fear	nervous, afraid, tense
Anger	hate, kill, pissed
Cognitive Processes	
Causation	because, effect, hence

Table 2. GREAT coherence coding rubric.

Coherence: How good is the overall plan or structure of the essay? Does the story progress logically, with a beginning, middle, and conclusion? If the reader is able to determine a beginning, middle, and end to the story that is the main focus of the essay, the essay is coded a 3 or higher. If not, it is a 2 or lower.				
1	2	3	4	5
Not enough was written to code this essay, or the essay is not understandable to the reader.	Possible evidence of attempted structure, but structure is hard to infer. The story focuses on more than one event, none of which have enough detail to give the story a clear focus, or there is not much detail provided about the focus event. Organization is rough, though it may not be completely absent.	Has basics of structure, including a roughly defined beginning, middle, and end. Has one main focus but also includes less important events/details that do not add to the reader's understanding, or, fails to provide important details that would add to the reader's understanding Frequently gets off topic.	Has good structure, including a beginning, middle and end in logical order. Tells about one specific event in detail with only minor digressions. Once or twice includes less important details that do not add to the reader's understanding.	Has good structure, including a beginning, middle and end in logical order. Tells about one specific event in detail. Does not make digressions.

Results

Descriptives
- Over 50% of all participants reported having experienced at least one betrayal trauma
- Women reported more betrayal trauma than men (see Figure 1)
- Significant correlations exist between symptoms and betrayal trauma

Figure 1. Percentage of male and female participants experiencing traumas in each level of betrayal.

Overall
$\chi2= 6.64$, p = .08

High betrayal
$\chi2= 21.56$, p < .001

Percent

None   Low   Medium   High

Maximum betrayal level reported

Male (n = 17)

Female (n = 55)

Intervention Results
- No significant overall main writing or gender effect on symptomatology outcome
- A significant gender by writing condition interaction emerged, which revealed that women in trauma writing condition benefited more than men in terms of psychological health as measured by linear combination of overall TSC measure and its subscales (in a MANOVA; see Figure 2)

Figure 2. Mean difference scores in total TSC symptoms from pre to posttest by writing condition and gender.

MANOVA
Effect size = .25, p < .05
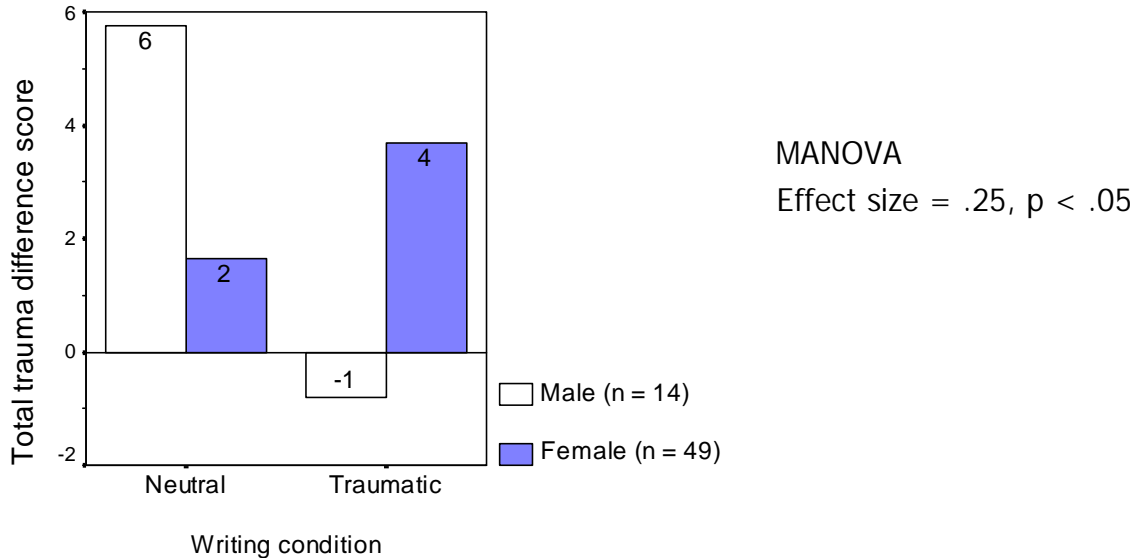
Note: positive difference scores indicate improvements, while negative scores indicate a worsening of symptomatology.

Content Analysis Results

Regressions were performed to predict posttest symptom scores from:
  (1) change in LIWC word (positive emotion, anxiety or fear, causal and insight) frequencies, and
  (2) coherence rating from essay 1 to essay 2 and the maximum word count or rating from either essay.

Also included as predictor variables were pretest scores (to control for baseline differences) and gender (because of the previously mentioned gender by posttest symptomatology interaction).

Because of the correlation nature of these analyses, significant results do not indicate causality between the content and outcome variables. Indeed, it is just as likely that psychological health, as indicated by the outcome measures, impacts how we write about traumatic experiences, as indicated by the content measures, than vice versa. Therefore, we also ran correlations between content and outcome variables, as well as regressions predicting outcome from content variables for neutral essays to get a better sense of the association between writing content and outcome.

Following is a summary of the regression results. Table 3 displays the specific analysis results.

LIWC emotion words:
- o Increased frequency of positive emotion words over the 2 writing periods, and greater use of anxiety or fear words in either essay, predicted improvements in symptomatology

LIWC causal and insight words:
- o Neither change in word frequency or overall word usage predicted symptomatology at posttest

GREAT coherence rating:
- o Increased coherence over the 2 writing periods predicted improvements (Figure 3 illustrates one of these predictive relationships)

Figure 3. Overall symptom change from pretest to posttest predicted by change in GREAT coherence rating from essay 1 to essay 2.
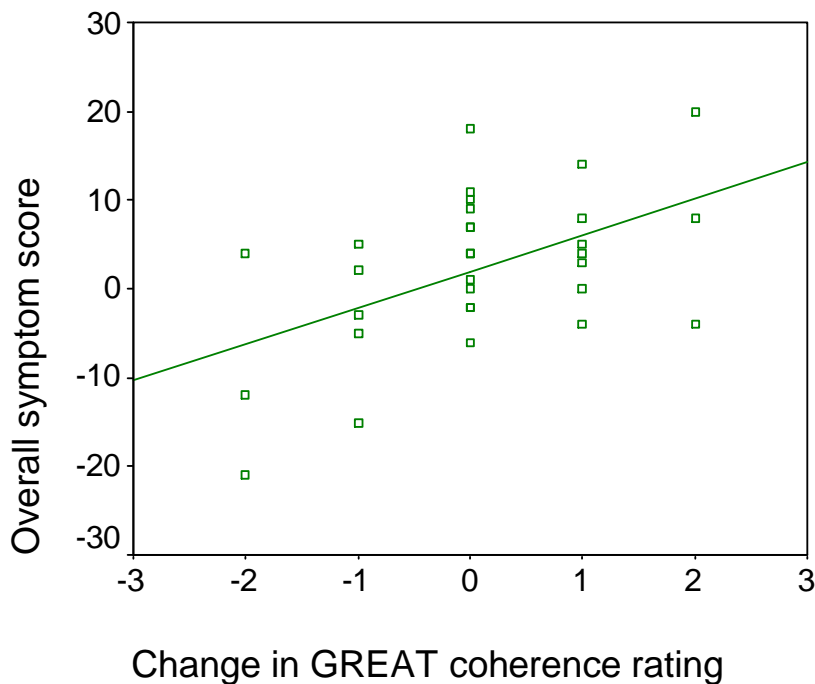
Table 3. Summary of significant symptom decrease prediction by change in LIWC word counts and GREAT coherence ratings from essay 1 to essay 2 (Change), and the maximum word counts and coherence ratings from both essays (Max), controlling for gender.

Content Analysis Variable	Decreased Symptom
é Change in LIWC positive emotion words	**Anxiety** Max: n.s. Df: β = -.23, t(28) = -2.04, r = -.36a **Post sexual abuse trauma** Max: n.s. Df: β = -.21, t(28) = -2.32, r = -.40*
é Max LIWC anxiety or fear words	**Overall symptom score** Max: β = -.14, t(28) = -1.43, r = -.20* Change: n.s. **Dissociation** Max: β = -.20, t(28) = -2.11, r = -.37* Change: n.s. **Depression** Max: β = -.28, t(28) = -2.02, r = -.36[a] Change: n.s. **Sleep difficulties** Max: β = -.25, t(28) = -2.53, r = -.43* Change: n.s.
ê Max LIWC anger words	**Post sexual abuse trauma** Max: n.s. Change: β = .18, t(28) = 2.01, r = -.36[a]
é Change in GREAT coherence rating	**Overall symptom score** Max: n.s. Change: β = -.36, t(26) = -5.10, r = -.71*** **TSC Dissociation** Max: n.s. Change: β = -.25, t(26) = -2.74, r = -.47* **TSC Anxiety** Max: n.s. Change: β = -.35, t(26) = -3.65, r = -.57*** **TSC Depression** Max: n.s. Change: β = -.39, t(26) = -3.08, r = -.52** **TSC PSAT-h** Max: n.s. Change: β = -.18, t(26) = -2.01, r = -.37[a] **TSC Sleep Difficulties** Max: n.s. Change: β = -.31, t(26) = -3.57, r = -.57***

* p ≤ .05   ** p ≤ .01   *** p ≤ .001   [a] approaching significance (p < .06)

For the pairs of variables with significant associations in Table 3 above, only the following baseline correlations were significant (or approaching significance):
1. Positive emotion words and post sexual abuse trauma symptoms, $R(35) = -.32$, $p = .06$
2. Positive emotion words and depression, $R(35) = -.47$, $p < .01$
3. Coherence and sleep difficulties, $R(70) = -.31$, $p < .01$

Of the regressions predicting outcome from content variables found to be significant in traumatic essays (see Table 3), the following emerged as significant in the neutral essays:
1. Change in positive emotion words and post sexual abuse trauma symptoms, $\beta = -.25$, $t(29) = -2.21$, $r = -.38$, $p < .05$
2. Maximum anxiety or fear words and dissociation, $\beta = -.40$, $t(27) = -2.47$, $r = -.43$, $p < .05$
3. Change in anxiety or fear words and dissociation, $\beta = .33$, $t(27) = -2.08$, $r = -.37$, $p < .05$ (in the opposite direction)
4. Change in anxiety or fear words and sleep difficulties, $\beta = -.32$, $t(27) = -2.18$, $r = -.39$, $p < .05$
5. Change in coherence and TSC Anxiety, Max: n.s., $\beta = .31$, $t(28) = 2.95$, $r = .49*$ (in the opposite direction)

Discussion

The large number of participants reporting high betrayal trauma is not surprising given that they were highly physically symptomatic. Many chronic pain disorders and health problems have been found to be related to trauma (e.g., Felitti, 2002). That women reported experiencing more high betrayal trauma replicates previous findings (Freyd & Goldberg, 2004).

The different types of traumas reported by the women and men of this study, and the differential results of the writing intervention for each gender, suggest it would be fruitful to consider the type of trauma experienced by an individual when considering intervention strategies.

Directing the writing process to include components found to be related to better outcomes may enhance the effectiveness of the writing intervention. It appears that positive outcomes are related to the frequency of emotion words used. While causation and insight words appear not to be related to outcome, increased coherence, as measured via global ratings, appears to be related to better outcomes. No causal interpretations can be made, but the lack of significant correlations between outcomes and coherence ratings in the neutral essays, and between baseline symptom measures and coherence ratings, suggest the change in coherence has predictive value.

Future research should be aimed at overcoming some of the limitations of this study, including improving the sample heterogeneity, increasing the followup latency, and experimentally manipulating the content and structure of the writing.

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Copies of this poster and handout can be obtained at http://dynamic.uoregon.edu/~jjf/istss04/.

For more information about betrayal trauma and research conducted in the Freyd Dynamics Lab, please go to http://dynamic.uoregon.edu.