

Andrews University

## Digital Commons @ Andrews University

---

Honors Theses

Undergraduate Research

---

2013

### Understanding Expressive Writing

Lindsay C. Dever

Follow this and additional works at: <https://digitalcommons.andrews.edu/honors>

---

#### Recommended Citation

Dever, Lindsay C., "Understanding Expressive Writing" (2013). *Honors Theses*. 63.  
<https://digitalcommons.andrews.edu/honors/63>

This Honors Thesis is brought to you for free and open access by the Undergraduate Research at Digital Commons @ Andrews University. It has been accepted for inclusion in Honors Theses by an authorized administrator of Digital Commons @ Andrews University. For more information, please contact [repository@andrews.edu](mailto:repository@andrews.edu).



Seek Knowledge. Affirm Faith. Change the World.

Thank you for your interest in the

## **Andrews University Digital Library**

*Please honor the copyright of this document by not duplicating or distributing additional copies in any form without the author's express written permission. Thanks for your cooperation.*

John Nevins Andrews Scholars  
Andrews University Honors Program

Honors Thesis

Understanding Expressive Writing: Its Relationship to Trauma, Resilience, and Parenting Style

Lindsay C. Dever

April 1, 2013

Advisors: Karl Bailey & Harvey Burnett

Primary Advisor Signature: \_\_\_\_\_

Department: Behavioral Sciences

### **Abstract**

Expressing trauma, specifically through expressive writing, leads to better health, both physically and psychologically. Specifically, the relationship between expressive writing and higher rates of affective (emotional) word use can be explained by reappraisal, a technique that reduces stress through better understanding. Reappraisal is thus related to resilience, and both are correlated with secure attachment. Secure attachment, in turn, is best fostered by authoritative parenting. Because of this research we predicted that there would be a positive relationship between resilience, language use, and authoritative parenting. In this study, 100 college-aged participants reported perceived parenting style and resilience. We randomly assigned participants to experimental and control groups, participants in the control group were asked to type a detailed account of their day, while the experimental group was prompted to type about a traumatic experience. Participants' responses were then saved, formatted, and analyzed using the Linguistic Inquiry and Word Count (LIWC) computer software program. We did not find the hypothesized positive relationship between authoritative parenting, resilience, and emotional language, raising questions about the mechanisms by which expressive writing facilitates well-being.

### **Introduction**

Expressive writing is the task of writing about how they felt during traumatic experiences, deep emotional experiences, or any other specific important life event. This exercise, completed in one allotted time period, or over several days, fosters engagement with a wide range of very personal feelings and is thus understandably connected to mental health. It has not only been shown to relate to lower levels of reported distress, but also to increased lymphocyte counts and lowered health center visits when compared to writing about mundane topics (Pennebaker, Kiecolt-Glaser, & Glaser 1988). Specifically, it is participants' use of a cluster of positively emotional words, such as the words "happy" or "joyful" that are linked to this better health (Pennebaker, 1997; Pennebaker, Mayne, & Francis, 1997). These outcomes may be explained by the way that expressive writing facilitates new thinking, meaning, and self-reflection; expressive writing is therefore thought to be a type of reappraisal (Pennebaker, 2011). Reappraisal is a type of emotional regulation strategy that helps a person reframe the traumatic experience and effect subsequent outcomes, much more so than the other type of emotional regulation known as suppression which merely distracts the individual temporarily and has thus been associated with lower lymphocyte counts (Petrie, Booth, & Pennebaker, 1998).

In making sense of, processing, and evaluating an experience for better understanding, reappraisal reduces stress, and thereby improves both physical and psychological health. Reappraisal's positive correlation to resilience further explains how resilience works to help a person cope with stress and trauma, supporting normal, healthy, stable functioning (Bonanno, Papa, & O'Neill, 2001). But where does resilience come from? At the very least, what supports its presence? Secure attachment style often involves resilience to resist stress and the reappraisal techniques to reframe those emotional events, thus clarifying the relationship between secure

attachment and the physical and psychological signs of well-being (Karreman & Vingerhoets, 2012).

The development of secure attachment and resilience, then, is very important if one is to become healthier. Growing research and conversation has acknowledged that resilience can be found, and even develops, in childhood, where many environmental factors can play a significant role (Agaibi & Wilson, 2005; Garmezy, 1991; Masten, 2001; Rutter, 1999; Werner, 1995). Parenting style, categorized by Baumrind (1971) as either authoritarian, authoritative, or permissive, is one of these environmental factors, with authoritative parenting, characterized by “emotional support, open communication, high standards, and appropriate autonomy granting”, being linked to the most positive results (Strage & Brandt, 1999). Due to the fostering of skill development and confidence, along with a consistent relationship between parent and child, it is no wonder that authoritative parenting and secure attachment are related (Karavasilis, Doyle, & Markiewicz, 2003).

Thus, literature indicates that the connection between positive outcomes and expressive writing is also related to parenting style, which affects attachment and the presence of resilience. Since resilience includes reappraisal as a coping technique and form of emotional regulation, and expressive writing is a reappraisal task, we hypothesize that there will be a positive relationship between higher levels of resilience, as well as authoritative parenting, and positive emotional language

### **Methods**

**Participants.** In this study 100 undergraduate students, taken from the Andrews University Behavioral Sciences Research Pool, agreed to participate. Demographically, 68 participants were female, 32 were male; 80 came from two-parent homes, while the remaining 20 came from

single-parent homes, Of participants from single parent homes, 18 identified that parent as their mother, and the other 2 as a single grandparent and a single father, 93 of the respondents identified themselves as Seventh-day Adventists. 94 were single, 3 were engaged, and 3 were married. Racially, 33 were White, 22 African-American, 17 Asian, 18 Latino, and 10 other. Although 92 of the participants were in the in 18-25 age range, but age ultimately ranged from 18 to 41.

**Instruments.** Participants reported the perceived parenting style for their childhood household using Buri's (1991) Parental Authority Questionnaire to categorize their parents as permissive, authoritative, or authoritarian by responding to 30 questions on a scale of 1 (strongly disagree) through 5 (strongly agree). (Baumrind, 1971). Using standard scoring we calculated three subscale scores for Authoritarian, Authoritative, and Permissive (Buri, 1991). Participants' resilience was measured using Wagnild and Young's (1993) Resilience Scale by responding to 25 questions on a scale of 1 (strongly disagree) to 7 (strongly agree). Using standard scoring we calculated a score for Overall Resilience and two subscales for Personal Competence and Acceptance of Self/Life (Wagnild & Young, 1999; Wagnild, 2009).

**Procedure.** After completing both instruments, participants were assigned randomly to the control or experimental group, and responded to specific prompts adapted from Pennebaker's writing paradigms (Pennebaker, 1997; Pennebaker & Chung, 2008). The control group was asked to respond to the following prompt:

“For the next 30 minutes, I want you to describe in detail what you have done since you woke up this morning. It is important that you describe things exactly as they occurred. Do not mention your own emotions, feelings, or opinions. Your descriptions should be as objective as possible. All of your writings will be completely confidential. Don't worry

about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up.”

The experimental group was prompted as follows:

“For the next 30 minutes, I would like for you to write about your very deepest thoughts and feelings about the most traumatic experience of your entire life. In your writing, I’d like you to really let go and explore your very deepest emotions and thoughts. You might tie this trauma to your childhood, your relationships with others, including parents, romantic involvements, friends, or relatives. You may also link this event to your past, your present, or your future, or to who you have been, who you would like to be, or who you are now. Not everyone has had a single trauma but all of us have had major conflicts or stressors – and you can write about these as well. All of your writings will be completely confidential. Don’t worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up.”

Participants’ responses were saved and formatted for analysis by correcting spelling errors, spelling out acronyms and abbreviations, changing nonfluencies such as “uh-huh” and “er” to fit nonfluencies included in the LIWC dictionary, fixing improper punctuation use, specifically hyphenated words, and clarifying the use of numbers, especially when used to define time (Pennebaker, Booth, & Francis, 2007b). After this process, responses were analyzed by the Linguistic Inquiry and Word Count (LIWC) computer software program which categorized the words used by participants by their content, calculating the percentage of various word categories from the total word count (Pennebaker, Booth, & Francis, 2007).

**Analysis.** The word categories that were specifically analyzed and correlated to the scores from the Resilience Scale and Parental Authority Questionnaire included Pronouns, Cognitive



Mechanisms, and Affect Words (Baikie & Wilhelm, 2005; Pennebaker, 1997). After the control and experimental group data were separated in order to see the differences between the two groups, we ran t-tests to check the success of the experimental manipulation. If the experimental group used many more Cognitive Mechanisms and Affect Words than did the control group this would demonstrate the effectiveness of expressive writing regarding higher rates of emotional and thoughtful writing. After the manipulation check, we examined correlations separately by group using a Pearson product-moment correlation coefficient.

### **Results**

T-tests on parenting style, resilience, and word usage revealed that there was no significant difference between the occurrence of resilience or certain parenting styles between the control and experimental groups. The t-tests did show that there were more Cognitive Mechanisms Words ( $t(98) = 15.7, p < 0.01$ ) and more Affect Words ( $t(98) = 12, p < 0.01$ ) used in the experimental than the control groups. This informs us that the experimental manipulation, expressive writing, was successful in facilitating the use of more emotional and thoughtful words.

This result follows our hypothesis in that, for one, the control group's scores on the questionnaires were not related to the rates of their word usage (all  $p > 0.1$ ). However, there were also no significant correlations between resilience and parenting styles, and the rates of words in the three categories in the experimental group. A few significant and marginal relationships were found, though, between resilience and parenting style; However, given the large number of word category variables entered into the correlation analysis, along with 3 variables for both resilience and parenting style, leads us to believe that such a small number of significant relationships

could easily be explained by Type 1 error and that the overall pattern of no or very little relationship serves to disprove our hypothesis.

### **Discussion**

The lack of significant relationship between the resilience scores, parenting style scores, and percentages of pronouns, Cognitive Mechanisms, and Affect Words can be explained by several considerations. First, all participants were enrolled in college and therefore can be assumed to be more resilient to begin with. This is because of the factors that support enrolling in college, like good and supportive prior education that provide for confidence in self and/or the resistance and adaptation to stress needed to reach the college level despite set backs (Waxman, Gray, & Pardon, 2003). Second, the participants were all students at a Christian university, with 93 of them specifying that they were Seventh-day Adventists. This association with religion may explain a general higher incidence of resilience and possibly reappraisal, which makes sense and gives meaning to emotional experiences, regardless of parenting style due to the support religion provides for individuals and the meaning it gives to their stories, as well as social support and self-regulation. (McCullough & Willoughby, 2009)

Furthermore, previous research on expressive writing has spaced the writing over several days, measuring the changes in word usage over time, and finding stronger evidences of better health as related to higher rates of words that suggest cognitive processing (Pennebaker, 1997; Pennebaker, Mayne, & Francis, 1997; Smyth, 1998). Perhaps if writing was done on more than one occasion, and the same questionnaires answered each time writing occurred, a difference would have been seen between writing and resilience scores. However, attention must be paid the current conversation about the definition of resilience or lack thereof. Bonanno (2004) argues that typical ideas of what resilience is, its prevalence, and what constitutes as normal forms of

response to trauma and loss are not fully substantiated. In fact resilience is much more common than previously believed and a wide range of coping skills, including laughter or uninterrupted daily functioning, are just as effective, adaptive, and supportive as the representative forms of sadness and crying (Bonanno, 2004). This disagreement surrounding the constitution of resilience and its related factors may shed light on a flawed basis for and method in our study.

Despite this disagreement, the success of the study's experimental manipulation shows that using expressive writing, prompting one to write personally and in-depth, actually gets one to write more thoughtfully and emotionally. Because of this result, expressive writing can be implemented in clinical and therapeutic settings to access emotions and thoughts, potentially facilitating a reframing of traumatic events and coping with stress. Recent research does not reinforce this implication but rather discourages it. Sbarra, and colleagues instead demonstrate that expressive writing is negatively related to positive emotional outcomes for separated couples (Sbarra, Boals, Mason, Larson, and Mehl (2013). Sbarra's study, then, serves a cautionary purpose in that expressive writing does not always assist people with their emotions, but can somewhat exacerbate them, and therefore clinicians and therapists should not necessarily use writing prompts until further research shows exactly what factors affect its process and outcomes.

### References

- Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse, 6*(3), 195-216.
- Baikie, K. A., & Wilhelm, K. (2005). Emotional and physical health benefits of expressive writing. *Advances in Psychiatric Treatment, 11*, 338-346. doi: 10.1192/apt.11.5.338
- Baumrind, D. (1971). Current patterns of parental authority. *Development Psychology Monograph 4* (2, Pt. 2).
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20-28.
- Bonanno, G. A., Papa, A., & O'Neil, K. (2001). Loss and human resilience. *Applied and Preventive Psychology, 10*, 193-206. doi: 10.1037/0003-066X.59.1.20
- Buri, J. R. (1991). Parental authority questionnaire. *Journal of Personality Assessment, 57*(1), 110-119.
- Garnezy, N. (1991). Resilience and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist, 34*, 416-430. doi: 10.1177/0002764291034004003
- Karavasilis, L., Doyle, A.B., & Markiewicz, D. (2003) Associations between parenting style and attachment orientation in middle childhood and early adolescence. *International Journal of Behavioral Development, 27*, 153-164. doi: 10.1080/0165025024400015
- Karreman, A., & Vingerhoets, A. J. J. M. (2012). Attachment and well-being: The mediating role of emotion regulation and resilience. *Personality and Individual Differences, 53*, 821-826.

- Masten, Ann. S. (2001). Ordinary Magic: Resilience Process in Development. In E. A. Farber & M. E. Hertzig (Eds.), *Annual Progress in Child Psychiatry and Child Development* (115-139). London: Routledge.
- Pennebaker, J.W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8, 162-166.
- Pennebaker, J. W. (2011). *The secret life of pronouns: What our words say about us*. New York: Bloomsbury Press.
- Pennebaker, J. W., Booth, R. J., & Francis, M. E. (2007). *Linguistic Inquiry and Word Count (LIWC): LIWC2007*. Austin, Texas: LIWC.net.
- Pennebaker, J. W., Booth, R. J., & Francis, M. E. (2007). *Linguistic Inquiry and Word Count (LIWC): LIWC2007 Operator's Manual*. Austin, Texas: LIWC.net.
- Pennebaker, J. W., & Chung, C. K. (2008). Expressive writing and its links to mental and physical health. In H. Friedman (Ed.), *Oxford handbook of health psychology*. New York, NY : Oxford.
- Pennebaker, J. W., Kiecolt-Glaser, J., & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. *Journal of Consulting and Clinical Psychology*, 56, 239-245.
- Pennebaker, J. W., Mayne, T. J., & Francis, M. E. (1997). Linguistic predictors of adaptive bereavement. *Journal of Personality and Social Psychology*, 72, 166-183.
- Petrie, K. P., Booth, R. J., & Pennebaker, J. W. (1998). The immunological effects of thought suppression. *Journal of Personality and Social Psychology*, 75, 1264-1272.
- Rutter, M. (1999). Resilience concepts and findings: Implications for family therapy. *Journal of Family Therapy*, 21, 119-144. doi: 10.1111/1467-6427.00108

- Sbarra, D. A., Boals, A., Mason, A. E., Larson, G. M., & Mehl, M. R. (2013). Expressive writing can impede emotional recovery following marital separation. *Clinical Psychological Science*. Advance online publication. doi:10.1177/2167702612469801
- Smyth, J. M. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology, 66*(1), 174-184.
- Strage, A., & Brandt, T.S. (1999). Authoritative parenting and college students' academic adjustment and success. *Journal of Educational Psychology, 91*(1), 146-156.
- Wagnild, G. M. (2009). *The resilience scale user's guide*. Worden, Montana: Resilience Center.
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement, 1*, 165-178.
- Werner, E. E. (1995). Resilience in development. *Current Directions in Psychological Science, 4*, 81-85.

John Nevins Andrews Scholars  
Andrews University Honors Program

Honors Thesis

Understanding Expressive Writing: Its Relationship to Trauma, Resilience, and Parenting Style

Lindsay C. Dever

April 1, 2013

Advisors: Karl Bailey & Harvey Burnett

Primary Advisor Signature: \_\_\_\_\_

Department: Behavioral Sciences

**Abstract**

Expressing trauma, specifically through expressive writing, leads to better health, both physically and psychologically. Specifically, the relationship between expressive writing and higher rates of affective (emotional) word use can be explained by reappraisal, a technique that reduces stress through better understanding. Reappraisal is thus related to resilience, and both are correlated with secure attachment. Secure attachment, in turn, is best fostered by authoritative parenting. Because of this research we predicted that there would be a positive relationship between resilience, language use, and authoritative parenting. In this study, 100 college-aged participants reported perceived parenting style and resilience. We randomly assigned participants to experimental and control groups, participants in the control group were asked to type a detailed account of their day, while the experimental group was prompted to type about a traumatic experience. Participants' responses were then saved, formatted, and analyzed using the Linguistic Inquiry and Word Count (LIWC) computer software program. We did not find the hypothesized positive relationship between authoritative parenting, resilience, and emotional language, raising questions about the mechanisms by which expressive writing facilitates well-being.



### **Introduction**

Expressive writing is the task of writing about how they felt during traumatic experiences, deep emotional experiences, or any other specific important life event. This exercise, completed in one allotted time period, or over several days, fosters engagement with a wide range of very personal feelings and is thus understandably connected to mental health. It has not only been shown to relate to lower levels of reported distress, but also to increased lymphocyte counts and lowered health center visits when compared to writing about mundane topics (Pennebaker, Kiecolt-Glaser, & Glaser 1988). Specifically, it is participants' use of a cluster of positively emotional words, such as the words "happy" or "joyful" that are linked to this better health (Pennebaker, 1997; Pennebaker, Mayne, & Francis, 1997). These outcomes may be explained by the way that expressive writing facilitates new thinking, meaning, and self-reflection; expressive writing is therefore thought to be a type of reappraisal (Pennebaker, 2011). Reappraisal is a type of emotional regulation strategy that helps a person reframe the traumatic experience and effect subsequent outcomes, much more so than the other type of emotional regulation known as suppression which merely distracts the individual temporarily and has thus been associated with lower lymphocyte counts (Petrie, Booth, & Pennebaker, 1998).

In making sense of, processing, and evaluating an experience for better understanding, reappraisal reduces stress, and thereby improves both physical and psychological health. Reappraisal's positive correlation to resilience further explains how resilience works to help a person cope with stress and trauma, supporting normal, healthy, stable functioning (Bonanno, Papa, & O'Neill, 2001). But where does resilience come from? At the very least, what supports its presence? Secure attachment style often involves resilience to resist stress and the reappraisal techniques to reframe those emotional events, thus clarifying the relationship between secure

attachment and the physical and psychological signs of well-being (Karreman & Vingerhoets, 2012).

The development of secure attachment and resilience, then, is very important if one is to become healthier. Growing research and conversation has acknowledged that resilience can be found, and even develops, in childhood, where many environmental factors can play a significant role (Agaibi & Wilson, 2005; Garmezy, 1991; Masten, 2001; Rutter, 1999; Werner, 1995). Parenting style, categorized by Baumrind (1971) as either authoritarian, authoritative, or permissive, is one of these environmental factors, with authoritative parenting, characterized by “emotional support, open communication, high standards, and appropriate autonomy granting”, being linked to the most positive results (Strage & Brandt, 1999). Due to the fostering of skill development and confidence, along with a consistent relationship between parent and child, it is no wonder that authoritative parenting and secure attachment are related (Karavasilis, Doyle, & Markiewicz, 2003).

Thus, literature indicates that the connection between positive outcomes and expressive writing is also related to parenting style, which affects attachment and the presence of resilience. Since resilience includes reappraisal as a coping technique and form of emotional regulation, and expressive writing is a reappraisal task, we hypothesize that there will be a positive relationship between higher levels of resilience, as well as authoritative parenting, and positive emotional language

### **Methods**

**Participants.** In this study 100 undergraduate students, taken from the Andrews University Behavioral Sciences Research Pool, agreed to participate. Demographically, 68 participants were female, 32 were male; 80 came from two-parent homes, while the remaining 20 came from

single-parent homes, Of participants from single parent homes, 18 identified that parent as their mother, and the other 2 as a single grandparent and a single father, 93 of the respondents identified themselves as Seventh-day Adventists. 94 were single, 3 were engaged, and 3 were married. Racially, 33 were White, 22 African-American, 17 Asian, 18 Latino, and 10 other. Although 92 of the participants were in the in 18-25 age range, but age ultimately ranged from 18 to 41.

**Instruments.** Participants reported the perceived parenting style for their childhood household using Buri's (1991) Parental Authority Questionnaire to categorize their parents as permissive, authoritative, or authoritarian by responding to 30 questions on a scale of 1 (strongly disagree) through 5 (strongly agree). (Baumrind, 1971). Using standard scoring we calculated three subscale scores for Authoritarian, Authoritative, and Permissive (Buri, 1991). Participants' resilience was measured using Wagnild and Young's (1993) Resilience Scale by responding to 25 questions on a scale of 1 (strongly disagree) to 7 (strongly agree). Using standard scoring we calculated a score for Overall Resilience and two subscales for Personal Competence and Acceptance of Self/Life (Wagnild & Young, 1999; Wagnild, 2009).

**Procedure.** After completing both instruments, participants were assigned randomly to the control or experimental group, and responded to specific prompts adapted from Pennebaker's writing paradigms (Pennebaker, 1997; Pennebaker & Chung, 2008). The control group was asked to respond to the following prompt:

“For the next 30 minutes, I want you to describe in detail what you have done since you woke up this morning. It is important that you describe things exactly as they occurred. Do not mention your own emotions, feelings, or opinions. Your descriptions should be as objective as possible. All of your writings will be completely confidential. Don't worry

about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up.”

The experimental group was prompted as follows:

“For the next 30 minutes, I would like for you to write about your very deepest thoughts and feelings about the most traumatic experience of your entire life. In your writing, I’d like you to really let go and explore your very deepest emotions and thoughts. You might tie this trauma to your childhood, your relationships with others, including parents, romantic involvements, friends, or relatives. You may also link this event to your past, your present, or your future, or to who you have been, who you would like to be, or who you are now. Not everyone has had a single trauma but all of us have had major conflicts or stressors – and you can write about these as well. All of your writings will be completely confidential. Don’t worry about spelling, sentence structure, or grammar. The only rule is that once you begin writing, continue to do so until your time is up.”

Participants’ responses were saved and formatted for analysis by correcting spelling errors, spelling out acronyms and abbreviations, changing nonfluencies such as “uh-huh” and “er” to fit nonfluencies included in the LIWC dictionary, fixing improper punctuation use, specifically hyphenated words, and clarifying the use of numbers, especially when used to define time (Pennebaker, Booth, & Francis, 2007b). After this process, responses were analyzed by the Linguistic Inquiry and Word Count (LIWC) computer software program which categorized the words used by participants by their content, calculating the percentage of various word categories from the total word count (Pennebaker, Booth, & Francis, 2007).

**Analysis.** The word categories that were specifically analyzed and correlated to the scores from the Resilience Scale and Parental Authority Questionnaire included Pronouns, Cognitive

Mechanisms, and Affect Words (Baikie & Wilhelm, 2005; Pennebaker, 1997). After the control and experimental group data were separated in order to see the differences between the two groups, we ran t-tests to check the success of the experimental manipulation. If the experimental group used many more Cognitive Mechanisms and Affect Words than did the control group this would demonstrate the effectiveness of expressive writing regarding higher rates of emotional and thoughtful writing. After the manipulation check, we examined correlations separately by group using a Pearson product-moment correlation coefficient.

### **Results**

T-tests on parenting style, resilience, and word usage revealed that there was no significant difference between the occurrence of resilience or certain parenting styles between the control and experimental groups. The t-tests did show that there were more Cognitive Mechanisms Words ( $t(98) = 15.7, p < 0.01$ ) and more Affect Words ( $t(98) = 12, p < 0.01$ ) used in the experimental than the control groups. This informs us that the experimental manipulation, expressive writing, was successful in facilitating the use of more emotional and thoughtful words.

This result follows our hypothesis in that, for one, the control group's scores on the questionnaires were not related to the rates of their word usage (all  $p > 0.1$ ). However, there were also no significant correlations between resilience and parenting styles, and the rates of words in the three categories in the experimental group. A few significant and marginal relationships were found, though, between resilience and parenting style; However, given the large number of word category variables entered into the correlation analysis, along with 3 variables for both resilience and parenting style, leads us to believe that such a small number of significant relationships

could easily be explained by Type 1 error and that the overall pattern of no or very little relationship serves to disprove our hypothesis.

### **Discussion**

The lack of significant relationship between the resilience scores, parenting style scores, and percentages of pronouns, Cognitive Mechanisms, and Affect Words can be explained by several considerations. First, all participants were enrolled in college and therefore can be assumed to be more resilient to begin with. This is because of the factors that support enrolling in college, like good and supportive prior education that provide for confidence in self and/or the resistance and adaptation to stress needed to reach the college level despite set backs (Waxman, Gray, & Pardon, 2003). Second, the participants were all students at a Christian university, with 93 of them specifying that they were Seventh-day Adventists. This association with religion may explain a general higher incidence of resilience and possibly reappraisal, which makes sense and gives meaning to emotional experiences, regardless of parenting style due to the support religion provides for individuals and the meaning it gives to their stories, as well as social support and self-regulation. (McCullough & Willoughby, 2009)

Furthermore, previous research on expressive writing has spaced the writing over several days, measuring the changes in word usage over time, and finding stronger evidences of better health as related to higher rates of words that suggest cognitive processing (Pennebaker, 1997; Pennebaker, Mayne, & Francis, 1997; Smyth, 1998). Perhaps if writing was done on more than one occasion, and the same questionnaires answered each time writing occurred, a difference would have been seen between writing and resilience scores. However, attention must be paid the current conversation about the definition of resilience or lack thereof. Bonanno (2004) argues that typical ideas of what resilience is, its prevalence, and what constitutes as normal forms of

response to trauma and loss are not fully substantiated. In fact resilience is much more common than previously believed and a wide range of coping skills, including laughter or uninterrupted daily functioning, are just as effective, adaptive, and supportive as the representative forms of sadness and crying (Bonanno, 2004). This disagreement surrounding the constitution of resilience and its related factors may shed light on a flawed basis for and method in our study.

Despite this disagreement, the success of the study's experimental manipulation shows that using expressive writing, prompting one to write personally and in-depth, actually gets one to write more thoughtfully and emotionally. Because of this result, expressive writing can be implemented in clinical and therapeutic settings to access emotions and thoughts, potentially facilitating a reframing of traumatic events and coping with stress. Recent research does not reinforce this implication but rather discourages it. Sbarra, and colleagues instead demonstrate that expressive writing is negatively related to positive emotional outcomes for separated couples (Sbarra, Boals, Mason, Larson, and Mehl (2013). Sbarra's study, then, serves a cautionary purpose in that expressive writing does not always assist people with their emotions, but can somewhat exacerbate them, and therefore clinicians and therapists should not necessarily use writing prompts until further research shows exactly what factors affect its process and outcomes.

### References

- Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse, 6*(3), 195-216.
- Baikie, K. A., & Wilhelm, K. (2005). Emotional and physical health benefits of expressive writing. *Advances in Psychiatric Treatment, 11*, 338-346. doi: 10.1192/apt.11.5.338
- Baumrind, D. (1971). Current patterns of parental authority. *Development Psychology Monograph 4* (2, Pt. 2).
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20-28.
- Bonanno, G. A., Papa, A., & O'Neil, K. (2001). Loss and human resilience. *Applied and Preventive Psychology, 10*, 193-206. doi: 10.1037/0003-066X.59.1.20
- Buri, J. R. (1991). Parental authority questionnaire. *Journal of Personality Assessment, 57*(1), 110-119.
- Garnezy, N. (1991). Resilience and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist, 34*, 416-430. doi: 10.1177/0002764291034004003
- Karavasilis, L., Doyle, A.B., & Markiewicz, D. (2003) Associations between parenting style and attachment orientation in middle childhood and early adolescence. *International Journal of Behavioral Development, 27*, 153-164. doi: 10.1080/0165025024400015
- Karreman, A., & Vingerhoets, A. J. J. M. (2012). Attachment and well-being: The mediating role of emotion regulation and resilience. *Personality and Individual Differences, 53*, 821-826.



- Masten, Ann. S. (2001). Ordinary Magic: Resilience Process in Development. In E. A. Farber & M. E. Hertzig (Eds.), *Annual Progress in Child Psychiatry and Child Development* (115-139). London: Routledge.
- Pennebaker, J.W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8, 162-166.
- Pennebaker, J. W. (2011). *The secret life of pronouns: What our words say about us*. New York: Bloomsbury Press.
- Pennebaker, J. W., Booth, R. J., & Francis, M. E. (2007). *Linguistic Inquiry and Word Count (LIWC): LIWC2007*. Austin, Texas: LIWC.net.
- Pennebaker, J. W., Booth, R. J., & Francis, M. E. (2007). *Linguistic Inquiry and Word Count (LIWC): LIWC2007 Operator's Manual*. Austin, Texas: LIWC.net.
- Pennebaker, J. W., & Chung, C. K. (2008). Expressive writing and its links to mental and physical health. In H. Friedman (Ed.), *Oxford handbook of health psychology*. New York, NY : Oxford.
- Pennebaker, J. W., Kiecolt-Glaser, J., & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. *Journal of Consulting and Clinical Psychology*, 56, 239-245.
- Pennebaker, J. W., Mayne, T. J., & Francis, M. E. (1997). Linguistic predictors of adaptive bereavement. *Journal of Personality and Social Psychology*, 72, 166-183.
- Petrie, K. P., Booth, R. J., & Pennebaker, J. W. (1998). The immunological effects of thought suppression. *Journal of Personality and Social Psychology*, 75, 1264-1272.
- Rutter, M. (1999). Resilience concepts and findings: Implications for family therapy. *Journal of Family Therapy*, 21, 119-144. doi: 10.1111/1467-6427.00108

- Sbarra, D. A., Boals, A., Mason, A. E., Larson, G. M., & Mehl, M. R. (2013). Expressive writing can impede emotional recovery following marital separation. *Clinical Psychological Science*. Advance online publication. doi:10.1177/2167702612469801
- Smyth, J. M. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology, 66*(1), 174-184.
- Strage, A., & Brandt, T.S. (1999). Authoritative parenting and college students' academic adjustment and success. *Journal of Educational Psychology, 91*(1), 146-156.
- Wagnild, G. M. (2009). *The resilience scale user's guide*. Worden, Montana: Resilience Center.
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement, 1*, 165-178.
- Werner, E. E. (1995). Resilience in development. *Current Directions in Psychological Science, 4*, 81-85.