

THE EFFECTS OF WRITING ABOUT TRAUMATIC EXPERIENCES ON
ADOLESCENTS IDENTIFIED AS EMOTIONALLY DISTURBED (ED)

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTORATE OF PHILOSOPHY

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF ARTS AND SCIENCES

BY

CATHERINE M. GARNO EVANS, M.A.

DENTON, TEXAS

AUGUST, 1999

DEDICATION

To my best friend, my husband Philip, for his love and for allowing me to keep stacks of books and articles on the floors and tables of our home for years without complaining

To Dad for his superior editing prowess and consistent words of encouragement. You have helped me so much these past several years. You are a fantastic father

To brother Ned. Can we go fire it up in Vegas yet?

To Grama for loving me and believing in me

To the memory of Grampa for always supporting his "little dolly"

Diane and Katho for being my cheerleaders

Finally, this is dedicated to the memory of my mom, Rosalie. I wish you were here to see the day. I did it Ma!

ACKNOWLEDGMENTS

There are so many people that I am ingratiated to... This process was certainly akin to climbing Mt. Everest. I could not have made it to the apex without a team of people tugging me up the slopes.

A special note of thanks to everyone at T.W.U; Dr. Vitro for always having a sense of humor (well, almost always), Dr. Miller for lending a shoulder to cry on, and Dr. Graham for having constructive feedback, kind words, and optimism. Thank you Dr. Jolly and Dr. McCullough for teaching me so much about the field of psychology. To Glenda and Karen for being wonderful support and my good luck charms. To the T.W.U. librarians for going out of your way several times to acquire urgent information for me. Words cannot express my gratitude. If I can make a positive impact on only one child's life, then you have all done your jobs well.

Dr. Aspy, in the L.I.S.D., I thank you for your excellence in the profession. You have made a tremendous impact on me during my formative years. I aspire one day to be half as good as you are.

Paige (Dr. Martin); I would never have been able to conduct this study without your help. I can't thank you enough for all that you have done for me. My final year of formal training would not have been the same without you

Thank you dad and Phil. Without your support I would not have found the strength to persevere.

Is it time to start heading down the mountain?

Abstract

THE EFFECTS OF WRITING ABOUT TRAUMATIC EXPERIENCES ON ADOLESCENTS IDENTIFIED AS EMOTIONALLY DISTURBED (ED)

Catherine M. Garno Evans, M.A.

August, 1999

The purpose of this study was to explore the effects of writing about traumatic experiences on adolescents identified as Emotionally Disturbed (ED). Adolescents identified as ED ($N = 48$) were randomly assigned to an experimental writing condition or a writing control condition. An additional group of subjects served as nonwriting controls. Participants in the experimental writing group and writing control groups wrote for 30 minutes on two separate occasions. Similar to the Pennebaker and Beall (1986) study, the adolescents in the experimental group wrote about their deepest emotions and thoughts and about the events in their lives that were most upsetting to them. Participants in the writing control group wrote about superficial topics, such as what they did since waking that morning. Participants in the nonwriting control group did not engage in a writing task. Number of absences from school and overall grade point average were collected for each participant as pretest and posttest measures. All subjects completed the Behavior Assessment System for Children Self-Report of Personality (BASC-SRP) at the conclusion of the study. Multivariate Analyses of Variance (MANOVAs) examined the relationships between the overall BASC score, absences, and grade point average and the

writing condition. A MANOVA on the posttest scores did not indicate statistically significant differences between the groups. A MANOVA on the difference scores from the pretest to posttest did not reveal significant differences concerning grades and absences. These findings suggest that the experimental writing treatment did not have an effect on the dependent measures. Results were discussed in terms of evaluating the effectiveness of the writing intervention and the necessity for future studies to address the psychotherapeutic needs of ED adolescents.

TABLE OF CONTENTS

DEDICATION	iii
ACKNOWLEDGMENTS	iv
ABSTRACT	v
LIST OF TABLES	ix
CHAPTER	
I. INTRODUCTION	1
II. REVIEW OF THE LITERATURE	5
Emotional Disclosure	5
Why does the writing paradigm work?	16
Purpose of the Study	18
Research Questions.....	19
III. METHOD	22
Participants	22
Definition of Emotional Disturbance	24
Instruments	26
Procedures	29
Research Design	34
Statistical Analysis	35

IV. RESULTS	36
V. DISCUSSION	47
REFERENCES	57
APPENDICES	64
APPENDIX A: Letter to Director of Special Education in LISD	65
APPENDIX B: Letter Granting Permission to Collect Data in LISD	68
APPENDIX C: Letter used to introduce study to counselors	70
APPENDIX D: Letter used to recruit participants	72
APPENDIX E: Parent Consent Form	74
APPENDIX F: Specific Instructions provided to the Experimental Writing Group..	76
APPENDIX G: Specific Instructions provided to the Writing Control Group.....	78

LIST OF TABLES

Table	Page
1. Subject Age Distribution and Percentages	23
2. Subject Grade Distribution and Percentages	24
3. 1990 Resident Population of the U.S., by Race and Hispanic Origin Compared to Sample Data Percentages.....	25
4. Pretest Means and Standard Deviations for Number of Absences	40
5. Pretest Means and Standard Deviations for Overall Grade Point Average	41
6. Pretest Multivariate Test of Significance	41
7. Posttest Means and Standard Deviations for Number of Absences	42
8. Posttest Means and Standard Deviations for Overall Grade Point Average	43
9. BASC Means and Standard Deviations	43
10. Posttest Multivariate Test of Significance	44
11. Means and Standard Deviations for the Difference Scores On Overall Grade Point Average	45
12. Means and Standard Deviations for the Difference Scores On Attendance	46
13. Multivariate Test of Significance for the Difference Scores On Attendance and Overall Grade Point Average	46

CHAPTER I

INTRODUCTION

Since 1986, James W. Pennebaker and his colleagues have been studying the value of writing and talking about upsetting experiences (Pennebaker, 1993). Pennebaker (1997) maintains that both talking and writing about upsetting experiences are superior to writing about superficial topics. The basic writing paradigm is relatively straightforward; subjects are assigned to either treatment or control conditions. Those in the experimental groups are asked to write about events in their lives that have been the most traumatic for them. Those in control groups write about other nontraumatic topics, such as their plans for the day. This line of research has demonstrated that subjects assigned to experimental conditions show a range of health and behavioral benefits independent of feedback from another person (Pennebaker, 1997).

The literature has also indicated that the expression of emotions can produce psychological benefits (Pennebaker & Francis, 1996). In fact, most psychologists would attest to the efficacy of having patients talk about traumatic experiences (Pennebaker & O'Heeron, 1984). Additionally, Pennebaker, Colder, and Sharp (1990) maintain that writing about traumas or stressful events has positive physical, and long-term psychological benefits. "As a form of preventive psychotherapy... the writing technique is simple, inexpensive, and free of potentially negative social feedback" (p. 536).

Furthermore, some people tend to reveal in writing more than they disclose orally since many stressful events cannot easily be discussed (L'Abate, 1991). For example, victims of sexual abuse and war atrocities are often hesitant to discuss their emotions concerning traumatic experiences due to shame or guilt. Perpetrators of crimes may fear getting caught (Esterling, Antoni, Fletcher, Margulies, & Schneiderman, 1994). Goleman (1995) contends that teenagers are another group of individuals often unable or unwilling to talk about their emotions. This is unfortunate in light of the evidence emphasizing the detrimental effects of emotion inhibition (Pennebaker & O'Heeron, 1984; Petrie, Booth, & Pennebaker, 1998; Thomas, 1997b). Interestingly, according to Goleman, the most common cause of disability among teenagers is mental illness. Goleman outlines a host of problems plagued by modern day adolescents:

In 1990...the United States saw the highest juvenile arrest rate for violent crimes ever; teen arrests for forcible rape has doubled; teen murder rates quadrupled... the suicide rate for teenagers tripled...more teenagers are getting pregnant...symptoms of depression, whether major or minor, affect up to one third of teenagers. (p. 231-232)

Current statistics show that violence continues to pervade the American schools (Kingery, Coggeshall, & Alford, 1998). High school dropout rates have increased (Egyed, McIntosh, Bull, 1998); there are increasing numbers of gangs, gang member drug involvement, and gang violence (Larson & Busse, 1998); and there are increasing lifetime rates of depression (Journal of the American Medical Association [JAMA], 1992).

Additionally, emotional disturbances such as adolescent depression predict future adjustment in the areas of marital discord, dropping out of school, unemployment, drug involvement, delinquency, being arrested, and having an automobile accident (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993).

Kazdin and Johnson (1994) maintain that school is an appropriate setting for the direct treatment of children and adolescents. However, as Prout and Prout (1998) point out, many school psychologists do not have time to conduct extensive psychotherapeutic interventions because of other demands. It may be of value, therefore, to explore the prospect of timesaving school-based interventions. Some question the role of the school as a mental health provider because the central mission of the schools is to educate. Nonetheless, there is a clear relationship between emotional functioning and academic and educational performance and many parents are unwilling and/or unable to make provisions for their children's mental health needs (Prout & Prout, 1998). Conceivably, it would be worthwhile to continue to develop new therapeutic techniques for use with the adolescent population at school.

Thus far, disclosure studies have suggested that there is a reduced absentee rate among employed adults who are encouraged to write or talk about upsetting events (Francis & Pennebaker, 1992); better classroom performance among college students who participated in an experimental writing exercise (Pennebaker, 1990; Pennebaker & Francis, 1996); and improved immunological functioning from individuals who disclose traumatic events in writing (Esterling et al., 1994; Petrie, Booth, Pennebaker, Davison, & Thomas,

1995). Despite accumulating evidence in support of the writing paradigm, little formal research has been directed at the issue of whether disclosing traumatic events in written format would be of value for younger individuals, such as children and adolescents. Within the foregoing framework, the present researcher designed a study to explore the efficacy of the writing technique within a population of Emotionally Disturbed (ED) adolescents.

CHAPTER II

REVIEW OF THE LITERATURE

Emotional Disclosure

Mounting evidence indicates that disclosing stressful experiences by way of writing can provide therapeutic benefits for a large portion of individuals (Cameron & Nicholls, 1998). Most, if not all, of these studies have demonstrated the efficacy of emotional disclosure with adult populations (Cole, Kemeny, Taylor, & Visscher, 1996; Greenberg & Stone, 1992; Pennebaker, Barger, & Tiebout, 1989; Spera, Buhrfeind, & Pennebaker, 1994). Research also points to the deleterious effects of suppressing emotional thoughts that arouse negative emotions (Pennebaker, 1985; Petrie et al., 1998; Thomas, 1997). Written or verbal expression of feelings surrounding trauma has been theorized to permit an individual to vent psychological discomfort and explain thoughts about the event, leading to affective change and cognitive reorganization (Lutgendorf, Antoni, Kumar, & Schneiderman, 1994). Czajka (1987) contends that emotional disclosure is beneficial in that it appears to be linked to the healing processes of the mind.

Following is a review of the literature concerning the effects of disclosing trauma. The research supports the notion that writing about emotional topics can promote behavioral changes, health benefits, and psychological benefits. Finally, the literature

reviews the various hypotheses concerning the efficacy of writing about traumatic experiences.

Pennebaker et al. (1989) produced research to suggest that improved long term health can be brought about by having individuals verbally disclose traumatic experiences. Pennebaker et al. recruited Holocaust victims from the Dallas Memorial Center for Holocaust studies in Dallas, Texas to participate in the study. Many Holocaust survivors had actively inhibited talking about their traumatic experiences. During interviews, only 30% stated that they had openly talked about the horrors of the Holocaust with anyone. Most felt that they did not want to upset friends or family with their experiences.

In one to two hour interviews, Holocaust survivors were encouraged to “open up” about traumatic experiences that occurred over 40 years ago (Pennebaker et al., 1989). By correlating skin conductance level (SCL) and heart rate (HR) during the interview, the investigators were able to assess which interviewees exhibited increases in SCL and HR. The health status of the Holocaust survivors was collected 2-3 weeks before the interview, and again 14 months after the interview. Thus, comparisons could be made with participants who exhibited positive health effects and participants who continued to suffer chronic health problems.

The central hypothesis of the study was that in depth interviews could positively influence long term health for the survivors. The autonomic nervous system (ANS) during the interview was expected to predict long term health. It was anticipated that drops in SCL (but not HR) could be expected from participants who chose to relate deeply

traumatic experiences over those who disclosed trauma on a superficial level. In turn, drops in SCL during the interview should result in positive health effects in the months following the disclosures. Pennebaker et al. (1989) predicted that highly disclosing survivors would be in better health than low disclosers in the year following the interview.

Self-report indices of health included the number of visits to the doctor and ratings of feelings prior to and after the interview. Participants were also asked about sadness, guilt, anger, nervousness, and physical symptoms. Sixteen females and 17 males were interviewed, with an average age of 65 years. Separate groups were identified during the interviews as having different degrees of disclosure. The researchers learned that higher disclosers were significantly less likely to visit a physician in the month following the interview. The research hypothesis was confirmed in that the more negative the trauma-SCL relationship, the less likely participants of both genders were to visit a physician and suffer illness. (Pennebaker et al., 1989).

Pennebaker et al. (1989) demonstrated how a one to two hour interview about previous traumatic experiences from over 40 years ago helped the Holocaust survivors relate to others about their subhuman experiences. It may have also helped the survivors process ideas about how they viewed the past. Of particular importance, the technique of disclosing showed significant positive health effects when individuals disclosed deeply traumatic events. The study showed that for groups of individuals who have suffered traumatic events in their lives, discussing the experiences can be physically and psychologically beneficial.

Josef Breuer and Sigmund Freud (1895/1955) believed that emotional inhibition and repression were primary reasons for the appearance of psychological illness. They emphasized the value of talking about the thoughts and feelings associated with upsetting events. This approach, known as the cathartic technique involves "awakening the emotions" (Nichols & Efran, 1985, p. 48) by a recollection of traumatic memories. Contemporary research exploring the cathartic technique is still dominated by the early works of Breuer and Freud (1895/1955). For instance, Thomas (1997a) has shown that talking about anger to a confidante has salutary health benefits. Additionally, cancer patients who perceive their ability to discuss their condition openly have been found to show more positive rehabilitation outcomes after treatment (Mesters et al., 1997). Conversely, women who suppress their anger at home have been shown to have higher blood pressure (Thomas, 1997b). Evidence also indicates that among bereaved spouses, suffering from traumatic grief, a host of ailments is likely to ensue. Without treatment, the condition appears to promote sleep disturbances, high blood pressure, heart trouble, and perhaps even cancer (Bower, 1997). However, the bereaved who openly discuss their spouses' deaths are less likely to suffer an increase in health problems.

In a study conducted by Pennebaker and O'Heeron (1984) on the coping mechanisms employed by spouses of suicide and accidental death victims, it was hypothesized that there would be a higher rate of health problems within the spouses of suicide victims. The researchers thought that those faced with a suicide death would be less likely to discuss the events surrounding the death and subsequently be confronted with

a greater frequency of health problems than spouses who were faced with accidental deaths. The research hypothesis was not supported. Instead, it was discovered that irrespective of the cause of the spouse's death, ruminating and not confiding in others about the death were positively related to increases in health problems. Thus, their results indicate that not only does the suppression of anxious thoughts have negative effects, but the expression of these thoughts may in some circumstances have positive effects (Roemer & Borkovec, 1994).

Other data provide evidence favoring the positive effects of catharsis. For instance, in a study of forty medical students vaccinated for the hepatitis B virus, it was found that subjects who expressed their emotions in the form of writing about traumatic events showed significantly greater levels of antibodies to the virus than a control group (Petrie et al., 1995). Following the format of previous research (Pennebaker et al., 1990), subjects who tested negative for hepatitis B antibodies were randomly assigned to write about emotional or control topics for four consecutive days. All participants were asked to indicate their mood prior to writing and after writing on each of four days. Blood samples were collected from the participants after completing four days of writing. Results of the study revealed differences across several variables and suggested that the expression of emotions can have powerful effects on mood and the body's immune functioning. Petrie et al. noted differences between the treatment and control group concerning mood. Both groups rated their moods similarly before writing. However, after writing, subjects in the treatment group reported higher ratings of "sadness," "guilt," and having a "pounding

heart.” Additionally, participants in the treatment condition developed a small but significantly higher amount of antibodies to the hepatitis B vaccine than the control groups. Petrie et al. concluded that changes in immunological response after emotional disclosure may have important health implications regarding immunity to infection.

In a similar study, it was demonstrated that the verbal and written expression of stressful events had a positive impact on the immune response to Epstein-Barr Virus (EBV) while the act of writing about nonstressful events was insignificant (Esterling et al., 1994). Undergraduates ($N = 57$) were randomly assigned to verbalize or write about stressful events or to write about trivial events. Esterling et al. were primarily interested in whether differences might exist between writing versus talking about stressful events and subsequent effects on EBV antibodies. The researchers found that subjects who verbalized stressful events had lower antibodies than those who wrote about stressful events. Those who wrote about stressful events had lower values than those in the control group. These findings suggest that those who verbalized their stressful experiences evidenced better cellular immune control over the virus than those who wrote about stressful events or those in the control group. Esterling et al. concluded that both writing and speaking about upsetting events have a beneficial effect on the immune system response to EBV and that writing about trivial topics produced inconsequential effects.

In research designed to examine the impact of writing about college adjustment on health, Pennebaker et al. (1990) randomly assigned freshmen to one of two experimental conditions. Those in the experimental group wrote for three consecutive days for 20

minutes each day about their deepest thoughts and feelings pertaining to college. They were encouraged to write about their emotions surrounding having to leave their friends and family from home. Subjects in the control condition wrote about other innocuous topics for each of the three writing sessions, such as their plans for the rest of the day, what they had done since waking up that morning, and a description of the last social event they attended. In comparison to subjects in the experimental group, these subjects were asked to avoid emotions in their writings. Several months after the study, Pennebaker et al. found that subjects assigned to the treatment condition differed from the control condition on a number of measures. First, subjects in the experimental condition had fewer visits to the health center for illness in the months after writing. Second, subjects in the experimental group reported higher rates of anxiety and homesickness two to three months after writing. However, by year's end, subjects in both groups were similar regarding grades and reports of mood. It is worthy to note that an interesting trend occurred concerning the academic performance of subjects:

In terms of their grade point averages, both groups did equally well their first semester, with their average grade being a C+. Their second semester, the people who wrote about coming to college evidenced a very small improvement. People who had written about superficial topics dropped to an average grade of a midlevel C. (Pennebaker, 1990, p. 83)

Spera et al. (1994) conducted a study of recently unemployed professionals and found that individuals laid off from their jobs who wrote about it were able to secure

employment more quickly than controls who did not write. Sixty-three laid off professionals, with an average employment range of 20 years participated in the research. Subjects were assigned to one of three conditions. Those in the experimental group wrote for 20 minutes on five consecutive days about their thoughts and feelings surrounding their job loss and how recent unemployment had affected their personal and professional lives. Writing control subjects were instructed to write about their plans for the day and the activities involved in their job search. This group was instructed to avoid giving opinions or feelings regarding their unemployment. A third group did not write, but served as an additional control group filling out questionnaires before and after the study. These questionnaires investigated health complaints and job search activity.

The most impressive finding was that experimental subjects were more likely to obtain reemployment than subjects in the control groups. Ironically, Spera et al. (1994) found that the subjects in the experimental group did not exert more energy in the job search; they did not make more contacts, receive more phone calls, or send out more letters than controls. An additional analysis revealed that experimental subjects drank less alcohol than did control subjects in the weeks following the study. The researchers postulate that writing about the events surrounding the unemployment may have helped the experimental group “to work through the negative feelings and to assimilate and attain closure on the loss, thus achieving a new perspective” (p. 731). It is also hypothesized that the writing task may have helped individuals get past any negative emotions, and thus

prevent sabotage on future employment. Spera et al. concluded that writing about job loss can facilitate the job-search process.

In recent years, evidence has accumulated concerning the detrimental effects of emotional inhibition. For example, Cole et al. (1996) found increased health related problems among gay men who concealed their homosexuality. Homosexual men diagnosed with HIV were tracked for five years on a number of health and psychological markers. These men were asked to describe the degree to which they concealed their homosexual identity. Every six months, blood was drawn, and the men were asked about their physical and psychological well-being. Results of the research indicated that the incidence of cancer and infectious disease increased relative to the status of revealing homosexual identity. These data concluded that men who conceal their homosexual identity face a higher incidence of physical illness.

Despite compelling research concerning the deleterious health effects of emotion inhibition, Pennebaker (1997) maintains that an explanation of how disclosure reduces inhibition and thus improves health is not always met with certainty. Gross and Levenson (1993) assert that “despite the commonness of emotional suppression, there is little agreement as to its effects” (p. 970). What are the effects of emotional disclosure and emotional inhibition?

Greenberg and Stone (1992) were interested in examining whether there would be a difference in health between previously disclosed trauma groups and undisclosed trauma groups. In particular, the researchers wanted to determine whether desirable health

outcomes would be specific to initial revelations or whether a continuation of traumatic disclosure would result in ongoing improvement in health. Sixty healthy participants wrote for four days about an undisclosed trauma, a previously disclosed trauma, or trivial events. Participants writing about undisclosed traumas were asked to write about experiences that had not been discussed with others. The second group wrote about traumatic experiences that they had previously shared with others. The control group wrote about specific events or topics that did not involve personal feelings.

Following the four writing sessions and the completion of corresponding questionnaires, health center personnel provided the researcher with a list of subjects who had requested health treatment during the study. The essays were examined for content and divided into severe versus nonsevere trauma groups. There were no significant differences between disclosed-trauma and undisclosed-trauma subjects regarding the extent of holding back the traumas from other people. Greenberg and Stone (1992) found that subjects in both disclosure groups had more physical symptoms immediately after the essay writing than control subjects. Previously disclosed trauma subjects reported slightly higher post-test levels of physical symptoms than undisclosed trauma subjects. This finding was contrary to the researcher's expectations and was in opposition to a theory of inhibition. Higher levels of negative mood, after essay writing were found for both trauma groups to be higher than for the control group. Surprisingly, positive mood data were higher for undisclosed trauma subjects than for disclosed trauma subjects. Essay writing about disclosed or undisclosed traumas did not result in positive health changes.

Additionally, essay writing by all three groups did not effect long term positive or negative mood. The primary finding of the study was that subjects with severe traumas reported fewer physical symptoms in the months following disclosure than the control subjects. The researchers concluded that positive health benefits can occur as a result of disclosing severe trauma regardless of whether or not a previous disclosure had occurred.

Murray, Lamnin, and Carter (1989) were interested in examining the differences between writing and talking about traumatic experiences. Psychotherapy was compared with a writing experimental group and control conditions. The researchers wanted to study whether the ventilation of emotions without feedback, as in the writing paradigm, would have different effects than traditional psychotherapy that combines catharsis and feedback. Similar to the Pennebaker and Beall (1986) study, 56 subjects were randomly assigned to one of three conditions. Those in the experimental written expression group were required to write for 30 minutes over two days about a disturbing event in their lives. Participants were asked to describe their emotional reactions to the event. Subjects in the psychotherapy group were asked to verbalize an upsetting event for 30 minutes to therapists who provided empathy, warmth, and helped reframe the experience. Problem solving and adaptive behavior were also encouraged by the therapists. The third group was assigned to write about trivial events for 30 minutes. Before the study and after, indicators of mood, blood pressure, and heart rate were collected.

Murray et al. (1989) found that psychotherapy with feedback differed from writing about upsetting experiences in a number of ways. The psychotherapy group demonstrated

greater cognitive, self-esteem, and adaptive changes than subjects in the written expressive condition as indicated by self-report ratings of mood and by analyses of their discussions with the therapists. The content of the psychotherapy discussions was compared with the content from subjects in the written expressive condition and control subjects.

Interestingly, the written expression group showed more gains in cognitive, self-esteem, and adaptive changes than the group assigned to write about trivial events. This suggests that writing and talking about upsetting experiences are both superior to writing about insignificant topics. Writing about upsetting experiences also produced a temporary change in negative affect from subjects in the written expressive condition. The upsurge in negative mood recovered to the same level as participants in the other conditions within 15 minutes. Heart rate and blood pressure results were insignificant, indicating that there may have been only temporary physiological arousal in some subjects. The investigators concluded that writing about stressful events may not be enough to produce resolution of the events and that psychotherapy seemed to allow for a cognitive reappraisal of upsetting experiences. The researchers stressed the importance of having a therapist guide individuals to resolution of traumatic events. This research supports a model of change that is based on change in cognition, rather than simple affective discharge.

Why does the writing paradigm work?

It is not entirely clear why writing is effective in bringing about such impressive health and behavioral changes (Pennebaker & Francis, 1996). In studies aimed at uncovering the underlying success of the writing paradigm, Pennebaker (1993) originally

thought that writing would boost health because it would ultimately lead to lifestyle changes. Contrary to this hypothesis, Pennebaker discovered that persons engaged in the writing task did not differ significantly from control groups who did not write about upsetting events regarding exercise, drinking, smoking, and sleeping. There was one exception. Spera et al. (1994) found that experimental subjects assigned to write about the traumas of job loss reduced their intake of alcohol consumption following the study.

Pennebaker (1993) then postulated that writing might change the way upsetting events are represented in individuals' memories or consciousness. Again, Pennebaker found that this hypothesis would not gain support. Perhaps the success for the writing paradigm relates to the content of the written essays. Although sparse, there has been some research to support this hypothesis (e.g., Greenberg & Stone, 1992).

What is the best explanation for the powerful effects of writing? There are two principal models that have been proposed to explain the efficacy of the writing paradigm (Pennebaker, 1997). The first pertains to a theory of active inhibition. Actively inhibiting thoughts and feelings associated with traumatic events requires physiological work in the autonomic and central nervous system. Over time, this act of inhibition places stress on the body and increases vulnerability to illness (Greenberg, Wortman, & Stone, 1996). If keeping upsetting or traumatic events, feelings, and behaviors to oneself is stressful on the body, then releasing these the events, feelings and behaviors should reduce the stress of inhibition (Pennebaker, 1997).

An alternate explanation for the efficacy of the writing paradigm is that it does more than allow for the reduction of inhibitory processes and that there may be cognitive changes associated with writing (Pennebaker, 1997). The theory of inhibition has evolved in recent years to include the central role of language (Pennebaker, Mayne, & Francis, 1997). Pennebaker and Francis (1996) contend that writing forces subjects to think differently about their traumatic experiences. In research designed to analyze aspects of language associated with different outcome measures, Pennebaker et al. (1997) had essays from previous studies computer analyzed for percentage of words judged to reflect negative emotions, positive emotions, causation, insight, or self-reflection. The researchers found that there was a link with better health and the use of positive versus negative words in the months after writing. This is opposed to a “differential emotion hypothesis” (Pennebaker et al., p. 869) which maintains that expressing negative emotions is more beneficial than expressing positive emotions. The research has shown this to be the contrary; some findings suggest that the expression of negative emotions relative to positive may be linked to higher rates of illness. Pennebaker et al. conclude that the expression of moderate negative and higher positive word usage would reap the most favorable health gains.

Purpose of the Study

The purpose of this study was to provide exploratory research using the traditional writing paradigm with adolescent subjects. The primary research hypothesis continued to focus on the effects of divulging troubling events independent of social feedback.

Pennebaker and Francis (1996) asked, “Do people who write about emotional experiences subsequently ruminate about them less, which ultimately allow them to focus more efficiently on their school work?” (p. 623). This question has particular relevance for ED adolescents who frequently struggle with behavioral and emotional issues at school. It seems plausible that writing would impact aspects of a child’s life including academic performance, health, behavioral, and emotional issues. Results of this study may be helpful in determining if the writing paradigm would serve as a useful adjunct to traditional forms of counseling with ED adolescents. Like previous studies (e.g., Murray et al., 1989), the current investigation was interested in whether traditional forms of counseling would show greater benefits when supplemented by writing about traumatic experiences. Would the adolescents show the most improvement without being required to disclose upsetting events? Or, would the adolescents be more likely to divulge personal information on paper as opposed to talking and thus, show greater improvement? With a review of the literature in mind, the researcher generated the following research questions to be addressed by the present study.

Research Questions

1. Would adolescents who disclosed traumatic experiences in written format achieve higher grade point averages at year’s end than a control group who wrote about trivial topics?

2. Would adolescents who divulged traumatic experiences in written format achieve higher grade point averages at year's end than controls who proceeded with traditional therapy and did not engage in a writing assignment?
3. Would adolescents who divulged traumatic experiences in written format have fewer absences from school at year's end than a control group who wrote about trivial topics?
4. Would adolescents who divulged traumatic experiences in written format have fewer absences from school at year's end than participants who continued with their traditional counseling and did not engage in a writing assignment?
5. Would self-report measures of emotion and self-perception differ across the three groups of adolescents at the conclusion of the study?
6. Would adolescents in the experimental writing condition demonstrate lower overall emotional distress as compared to the group writing about trivial topics?
7. Would adolescents in the experimental writing condition demonstrate lower overall emotional distress as compared to the group receiving traditional counseling who did not engage in the writing assignment?
8. Would there be a improvement in attendance and/or grades for the adolescents in the experimental writing condition from the time period before they engaged in the writing task to the time period after the writing assignment?

With the growing number of investigations based on adult samples, it seems plausible that comparable kinds of health, behavioral, and psychological effects would emerge with younger populations. The present investigation attempted to explore this

issue. If the findings from previous research were replicated (e.g., Pennebaker & Beall, 1986; Pennebaker & Francis, 1996), between-group differences would have emerged as a function of the assignment to the level of the independent variable. Results of the study may contribute to body of literature concerning the efficacy of the writing paradigm and provide information concerning a new therapeutic technique for working with ED adolescents.

CHAPTER III

METHOD

This chapter is divided into four sections. In the first section, Participants, a description of the sample and demographic characteristics are provided. In the second section, a Definition of Emotional Disturbance is offered. In the third section, Instruments, the Behavior Assessment System for Children (BASC) is reviewed. The fourth section, Procedures, discusses the particular procedures used in the study. The fifth section, Research design, describes the design employed in the analyses of the data. The sixth and final section, Statistical Analysis, discusses the statistical analyses used to aid in the interpretation of the data.

Participants

The sample for this study was drawn from the Lewisville Independent School District (LISD) in Lewisville, Texas. Permission to conduct the study was sought and granted from the Executive Director of Special Education for LISD (see Appendices A and B). Forty-nine subjects gave their consent to participate, but due to attrition 48 completed the study. The final subject pool consisted of 48 adolescents with a previous classification of Emotional Disturbance (ED) ($N = 48$); 12 females 25% and 36 males 75%. ED was the primary handicapping condition of each participant. Adolescents from

13 schools participated district wide; 8 were middle schools (grades sixth through eighth), 4 were high schools (grades ninth through twelfth), and 1 combined middle and high school students. The sample consisted of students ranging from 12 to 17 years of age, with a mean age of 13.81 years (See Table 1). Table 2 lists the grades of the participants.

Table 1.

Subject Age Distribution and Percentages

Age	<u>n</u>	Percent of Sample
12-year-olds	12	25%
13-year-olds	11	22.9%
14-year-olds	10	20.8%
15-year-olds	7	14.6%
16-year-olds	5	10.4%
17-year-olds	3	6.3%

All participants were receiving Special Education counseling as part of their Individualized Educational Plan (IEP). Pennebaker (1997) maintains that variables such as age and sex have not been found to relate to outcome measures in the writing paradigm. In addition, at least for college students, “no differences have been found as a function of the students’ ethnicity or native language” (p. 164). Consistent with previous research, this study’s sample was varied in race and gender. Table 3 compares the present sample

with the 1990 resident population of the United States concerning race and Hispanic origin (Wright, 1998).

Table 2.

Subject Grade Distribution and Percentages

Grade	n	Percent of Sample
6th grade	9	18.8%
7th grade	20	41.7%
8th grade	6	12.5%
9th grade	8	16.7%
10th grade	2	4.2%
11th grade	3	6.3%

Definition of Emotional Disturbance

Federal regulations and State Board of Education rules for handicapped students stipulate conditions for the identification of emotional disturbance. The current definition for identifying children and adolescents with emotional disabilities was developed from the Education of the Handicapped Act (EHA). The EHA outlined specific criteria for identifying children with a serious emotional disturbance (SED). Revisions in federal regulations led to The Individuals with Disabilities Education Act (IDEA, 1990) which retained the original criteria. However, the 1997 revisions of IDEA changed the nomenclature from serious emotional disturbance to emotional disturbance.

Table 3.

1990 Resident Population of the U.S., by Race and Hispanic Origin
Compared to Sample Data Percentages

Race/Hispanic Origin	Census Population	Sample Population	<u>n</u>
White	80.3%	75.0%	36
Black	12.1%	14.6%	7
Asian	2.9%	2.1%	1
American Indian, Eskimo, or Aleut	.8%	2.1%	1
Other	3.9%	0%	0
Hispanic Origin	9.0%	6.3%	3

Note. Persons of Hispanic origin may be of any race.

Federal regulations establish the current definition of ED:

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance:

- A. An inability to learn which cannot be explained by intellectual, sensory, or other health factors;
- B. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
- C. Inappropriate types of behavior or feelings under normal

circumstances;

D. A general pervasive mood of unhappiness or depression;

E. A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) The term includes children who are schizophrenic. The term does not include children who are socially maladjusted unless it is determined that they have a serious emotional disturbance. (34CFR 300.5 (b) (8))

If a child meets all of the criteria set forth in (i) and meets at least one criteria from A-E, then he or she meets the classification as ED. Children who meet the criteria set forth in (ii) also meet the classification as ED. Children not meeting the above listed criteria are not eligible to receive Special Education services as a student with ED.

Instruments

The Behavior Assessment System for Children (BASC, Reynolds & Kamphaus, 1992) was designed to assist in the identification of school-aged children and adolescents with emotional disturbances and behavioral disorders. The BASC has been described as “one of the most useful and sophisticated of all the measures available to those wishing to assess school-age children” (Sandoval & Echandia, 1994, p. 425). However, the BASC has not been met without criticism (e.g., Merenda, 1996). The BASC uses an integrated approach to gather information about a child. Data are gathered from five sources (teachers, parents, direct observation, students, and historical records) which can be used

alone or in combination. For the current investigation, the Self-Report of Personality (SRP), adolescent level, was used (the self-report measure in the BASC system).

The SRP consists of 186 statements responded to as either true or false. The SRP is comprised of 14 scales targeting both positive (adaptive) and negative (clinical) functioning. The SRP scales include: (anxiety, atypicality, locus of control, social stress, somatization, attitude to school, attitude to teacher, sensation seeking, depression, sense of inadequacy, relations with parents, interpersonal relations, self-esteem, and self reliance), four main composite areas, (clinical maladjustment, school maladjustment, personal adjustment, and one to monitor anxiety, depression, and social stress scales), and one global composite score, the Emotional Symptoms Index (ESI). The ESI is composed of items from both the adaptive and clinical scales. The present study used only the ESI as a measure in which to compare groups.

The BASC manual (Reynolds & Kamphaus, 1992) reports various types of reliability checks. "The SRP composites and many of the scales have high internal-consistency and test-retest reliability" (p. 157). Internal consistency reliabilities for the SRP, adolescent level average about .80 for each gender in the general norm sample. The composite score reliabilities range from the mid .80s to the mid .90s. Internal consistency for the clinical norm sample is very similar to the general norm sample, with reliabilities ranging from .91 to .96 for the composites. The ESI internal consistency reliability is the highest of the composite reliabilities, at .96, for the clinical, adolescent norm sample. Merenda (1996) concludes that the coefficients of internal consistency are quite impressive

but criticizes the time interval used for retest purposes (0-1 month). Nonetheless, Reynolds and Kamphaus found the median test-retest correlation for the SRP scales is .76 for the scales, suggesting that little change occurs over a one month-period regarding ratings of emotions and attitudes assessed by the SRP. Retest correlations for the composites are in the in the low to mid .80s.

Doyle, Ostrander, Skare, Crosby and August (1997) recently demonstrated the validity of the BASC-Parent Rating Scale (PRS) as comparable to that of the Child Behavior Checklist (CBCL; Achenbach, 1991). However, studies on the SRP are scarce and Merenda (1996) contends that additional effort should be exerted to improve the psychometric properties of the BASC. Existing validity data are supplied in the BASC manual (Reynolds & Kamphaus, 1992). Several studies have been conducted to support the construct validity of the SRP. For these studies, the SRP was completed at the same time as other rating scales. As compared to the Minnesota Multiphasic Personality Inventory (MMPI), the SRP does not have consistently related counterparts. However, some of the subscales show high correlations. For instance, the anxiety scales reveal a correlation of .76, and the SRP atypicality scale shows a correlation of .63 with the MMPI schizophrenia scale. Comparisons between the SRP with the Youth Self-Report (YSR) suggest that the ratings scales are two different instruments, with the SRP focusing on emotions and cognitions and the YSR on behaviors. Nonetheless, a strong relationship exists between the SRP clinical maladjustment composite and the YSR internalizing composite, with correlations of .84 for females and .74 for males. Reynolds and

Kamphaus conclude that the pattern of correlations between the SRP and other rating scales provide support for the construct validity of the SRP.

A correlation matrix for the SRP with the Teacher Rating Scale (TRS) and Parent Rating Scale (PRS) of the BASC system explores convergent and discriminant validity. There appear to be low to moderate correlations between the student self-reports and ratings by parents and teachers. Reynolds and Kamphaus maintain this finding is consistent with previous research that demonstrated how student self-reports correlate to a low level of agreement with teacher and parent ratings. This suggests that a child or adolescent's perception of him or herself will differ from the perspectives of others.

Despite mixed reviews (Merenda, 1996; Sandoval & Echandia, 1994) the authors of the BASC have expended considerable effort in the design and development to produce a psychometrically sound instrument. Future research will continue to provide information about the psychometric properties of the BASC-SRP. Merenda believes that "continued efforts... could render the BASC the foremost instrument available..." (p. 232).

Procedure

An informal letter was devised for each of the Special Education counselors in LISD working with ED adolescents. This letter described the intent of the research and sought assistance in conducting the research (see Appendix C). An additional letter was attached in draft format to be considered in the mailing to the parents (see Appendix D). Twelve Special Education counselors (9 counselors and 3 school psychologists) expressed interest in participating in the research. Similar to the Pennebaker et al. (1990) study, a

letter describing research on "writing, and/or counseling on the junior high and high school experience" was mailed to the parents of approximately one hundred 12 through 17-year-old junior high and high school students identified as ED. Approximately 60 additional forms were sent home by various Special Education teachers throughout the district. Parental/child consent forms and self-addressed stamped return envelopes were included in the mailing (see Appendix E). The consent form specified that some participants in the study would be asked to write about events that have been traumatic or upsetting to them while others would be asked to write about topics such as what they have done since waking that morning. At the request of the Human Subjects Review Board from Texas Woman's University, the consent form also emphasized that no one would ever read the content of the essays and that the unread writings would be shredded. Additionally, the consent form stated that some participants would continue with their regular counseling session and would not engage in a writing exercise. Finally, the consent form stated that each participant would be asked to complete a questionnaire at the end of the study that would take approximately 15-20 minutes to complete. Parents were notified that space in the study would be limited to the first 51 respondents.

A follow-up telephone call was made to most of the parents by the researcher and/or the Special Education counselor shortly after receipt of the introductory letter. At that time, parents were given more specific information about the tasks and time involved in the study. Parents interested in having their child participate responded by mail, by fax, or by returning the consent form to their child's teacher or Special Education counselor.

To assure confidentiality, participants were assigned a number upon receipt of the informed consent. All identifying information was subsequently coded with each participant's number. As mentioned previously, 49 subjects gave their consent to participate, but due to attrition, 48 respondents remained in the study. The subjects participated at their schools.

Before the onset, participants were encouraged to ask questions relating to their involvement in the research. Participants were advised that at any time they may have withdrawn from the study without penalty. All subjects were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992). With informed consent and ethical committee approval, thirty-one participants were randomly assigned to the experimental writing condition ($n = 15$) or the writing control condition ($n = 16$). A third group of subjects was included as nonwriting controls ($n = 17$) and engaged in their regular counseling sessions without writing. Random assignment was conducted by drawing names of the participants from a hat.

During their scheduled counseling session, the writing experimental group ($n = 15$) was presented instructions by their Special Education counselors in a sealed envelope. These instructions varied according to the assigned level of independent variable. The Special Education counselors were blind to the levels of treatment assigned to each participant. The envelopes contained paper and an envelope in which the participants enclosed and sealed their written responses. For the experimental condition, the instructions specified that each participant should write on the provided paper about

events that are troubling them without regard to spelling and grammar. Specifically, the adolescents were asked to write about events in their lives that were most upsetting to them. Appendix F provides the specific instructions for to the experimental writing group. These participants were instructed to use as many emotions as they could in describing their upsetting experiences. The experimental group spent the first 30 minutes of their counseling sessions writing about their most traumatic and upsetting experiences. If the participants stopped writing before the allotted 30 minutes, they were encouraged to continue writing. The instructions stated that the participants were not required to discuss their writings with their counselors. To ensure privacy and encourage freedom of expression, subjects in the experimental and first control groups enclosed their written materials in the envelopes provided and returned them to their counselors after sealing them. Subjects were assured in written format, and orally that their counselors would not see their writings and that their unread essays would be shredded.

The writing control group ($n = 16$) also wrote, but did so regarding daily activities, including everything they have done since waking that morning (Pennebaker et al., 1990). Refer to Appendix G for the writing control group instructions. This group was also presented with a sealed envelope. The envelope contained the written instructions, paper, and an envelope in which to enclose their writings. These participants were also instructed to write without regard for spelling and grammar. This group, however, was asked to not mention emotions in any of their writings. All procedures were the same for this group as the experimental group except for the difference in the writing topic. The writing exercise

for both writing groups continued from April 26, 1999 until May 12, 1999 so that each participant wrote on two separate occasions, 30 minutes each.

The no-writing control group ($n = 17$) continued with their regular counseling sessions but without a writing task. The counselors collected the writing materials and BASC self-report measures as they were completed and returned them to the investigator. After subjects in the experimental writing group and writing control group wrote two times over the course of two separate counseling sessions, and the no-writing control group visited with their counselor two times, the posttest data were gathered.

Grades and number of absences were collected for the grading period prior to the onset of the study (Time 1) and at the school year's end (Time 2). These data were calculated by gathering the total number of absences (excused plus unexcused) per class from the time period February 22- April 9, 1999 for the middle school students and from January 5- March 12, 1999 for the high school students. These time periods serve as the pretest measure (Time 1). Overall grade point averages were calculated for each student during Time 1 by comparing the classes that rolled over from one reporting period to the next. The range of grades was 0-100, with 100 indicating that the student received a perfect average. To be calculated in the overall grade point average for that reporting period, the student had to have taken the same class for two consecutive reporting periods. Specifically, only classes taken for two consecutive reporting periods were used in the calculation of the overall grade point average. This allowed for a sound comparison of grades from one time to the next. Absences and grades were also collected for each

participant from April 12- May 26, 1999 for the middle school students, and from March 22- May 26, 1999 for the high school students. This period serves as the posttest measure (Time 2).

The BASC-SRP was completed by all three groups from May 18, 1999 until May 26, 1999. This time lapse followed a period of at least 6 days from the writing assignment. Pennebaker (1993) maintains that “in the short run, confronting upsetting experiences may be psychologically painful and physiologically arousing. In the long run... confronting emotionally upsetting events is associated with improved physical and psychological health” (p. 546). As Pennebaker found, subjects may feel sad or depressed immediately after writing. Murray et al. (1989) confirm a temporary upsurge in negative affect after writing about upsetting events. Pennebaker (1990) contends that these feelings usually lessen within an hour or so. In unusual cases, they may last for a day or two. The time lapse between writing and completing the BASC would potentially decrease residual emotions resulting from the writing task. It was thus reasoned that by waiting, immediate emotional distress from the writing task would diminish and exert no influence on the SRP.

Research Design

The data for this study supported two separate research designs. First, a posttest-only control group design was employed to test the effects of the writing treatment in regard to the participant’s BASC-ESI T scores, attendance, and overall grade point averages. For this analysis, the experimental writing group was compared to the writing

control group and the nonwriting controls at the conclusion of the writing study (at time 2) across all three dependent measures.

The second analysis employed a matched pairs design using the difference in performance on overall grade point average and attendance from Time 1 to Time 2 as a measure of the treatment effect. The hypothesis for this analysis predicted that an improvement from Time 1 to Time 2 would emerge for the experimental writing group.

Statistical Analyses

Several analyses were utilized. First, MANOVA was used a priori to assess whether or not differences existed between the groups across the dependent measures of grades and absences at the onset of the study. Second, MANOVA was used to assess the differences between the three groups of participants on the dependent measures of BASC-ESI, Time 2 grades, and Time 2 attendance after the treatment was suspended. Finally, a MANOVA was used on the difference scores from Time 1 to Time 2 for the attendance and overall grade point average measures.

CHAPTER III

RESULTS

The purpose of this investigation was to examine if writing about upsetting or traumatic events would be beneficial to ED adolescents. Considering prior research, four research hypotheses were generated. These hypotheses examined the relationship between one independent variable (IV) of writing condition (with three levels; writing about trauma, writing about trivial events, and no writing) and three dependent variables (DVs) of absences from school, grade point averages, and BASC-ESI scores. An additional hypothesis examined the difference scores for each group for grades and absences between the first grading period (Time 1) and the second grading period (Time 2). The research hypotheses were:

Hypothesis 1: Participants who divulged traumatic experiences in written format (the experimental writing group) would achieve higher grade point averages at Time 2 than the writing control group or nonwriting controls who continued with traditional therapy and did not engage in a writing task.

Hypothesis 2: The experimental group would have fewer absences from school at Time 2 than either control group.

Hypothesis 3: The experimental group would obtain lower BASC-ESIs as compared to either control group.

Hypothesis 4: After writing about traumatic experiences, the experimental group would demonstrate an improvement in overall grade point average and attendance from Time 1 to Time 2 as compared to either control group.

Results are presented in the following order. First, the assumptions required for a multivariate analysis are reviewed, independence is discussed, and the tests for normality are presented. Then, results of examining the data for the presence of outliers are discussed, followed by an examination of the homogeneity of the variance-covariance matrices. Finally, MANOVAs are used to test hypotheses 1 through 4.

Assumptions of MANOVA

Weinfurt (1996) reviews three primary assumptions that must be assessed prior to the interpretation of the results of a MANOVA. These assumptions are: independence of observations, multivariate normality, and homogeneity of the covariance matrices. For a MANOVA to be considered valid, a researcher is wise to exert effort in meeting these assumptions. Along with the aforementioned assumptions, it is important to note that MANOVA is particularly sensitive to outliers because their impact will be disproportionate in the overall results. The following information addresses the restrictions concerning multivariate analysis with respect to the present study.

Independence of observations

Weinhurt (1996) maintains that independence of observations is the most important assumption in MANOVA. This means that one subject's scores on the dependent variables are not influenced by the other subject's in his or her experimental

group. For the present study, the subjects did not interact while completing the BASC. Additionally, participants were from thirteen schools throughout the district. In most cases, subjects were from different classes and different schools and were not aware of their counterpart's participation in the study. Thus, it is highly likely that each subject's grades and attendance measures were not influenced by each other. Consequently, the independence of observations assumption has been justified.

Normality

The data in this study were examined by using the Shapiro-Wilk test for univariate normality. Mean substitution was used to replace missing data points. The Shapiro-Wilk test suggests that there is not evidence to reject that the variables of BASC-transformed ($W = 0.971$, $p = 0.447$), Time 1 grade point average ($W = 0.957$, $p = 0.131$), and Time 2 grade point average ($W = 0.948$, $p = 0.056$) are from the normal family. This suggests that these data are from a normal distribution. However, when the attendance variables were examined, the Shapiro-Wilk test indicated that the data were not normal; Time 1 attendance ($W = 0.917$, $p = 0.002$), and Time 2 attendance ($W = 0.916$, $p = 0.002$). In regard to the violation of the multivariate normality assumption, Weinfurt (1996) asks, "What if the distribution of the dependent measures is not multivariate normal? In terms of Type I error rate, the MANOVA appears to be fairly robust. That is, violation of the multivariate normality assumption has a small effect on the actual alpha level..." (p. 254). Subsequently, the researcher continued to examine the other assumptions of MANOVA, namely whether these data contained outliers.

Homogeneity of Variance-Covariance and Testing for Outliers

Hair, Anderson, Tatham, and Black (1995) maintain that a multivariate analysis is especially sensitive to outliers and their impact on the Type I error and recommend that the data be examined for outliers at the onset of the analysis. Thus, before testing the research hypothesis, the data were examined using S-Plus for Windows, version 4.5 for the presence of univariate outliers. For the univariate detection, raw scores were converted to z -scores. The conversion revealed one deviant z -score on the attendance measure taken at Time 1 and two deviant z -scores on the attendance measure taken at Time 2, indicating that three z -scores for the attendance measure fell 2.5 standard deviations above the mean. The BASC-ESI data, which are furnished by T scores, also revealed one outlier. To normalize the distribution, the raw attendance and BASC-ESI T score data were converted using a square-root transformation.

Before continuing, the researcher wanted to ensure that the groups did not differ on their attendance or grade point average at Time 1. After the data were transformed, the homogeneity of variance-covariance matrices were tested using the Statistical Package for the Social Sciences, 8.0 (SPSS) MANOVA program. It was found that Box's $M = 7.55$ with $F(6, 46874) = 1.17, p = .315$. With alpha set at .01 this indicates that the null hypothesis cannot be rejected and that the data exhibited the necessary homogeneity of variance-covariance matrices in order to proceed with MANOVA. A MANOVA was performed with writing condition as the independent measure (three levels; experimental writing group, writing control group, and no treatment control group) and measures of

grades and attendance taken at Time 1 (the grading period from February 22- April 9, 1999 for the middle school students, and the grading period from January 5-March 12, 1999 for the high school students) as the dependent measures. Means and standard deviations for attendance and grades for the three groups at the pretest measure are presented in Tables 4 and 5, respectively. Table 6 presents the multivariate tests of significance for the Time 1 overall grade point averages and absences. As seen from Table 6, the multivariate F test revealed that there were no significant differences between the three groups on the measures taken for attendance or overall grade point average at the pretest measure (Wilks' $\Lambda = .895$, $F = 1.25$, $df = 4, 88$, $p = .294$). This indicates that there were no remarkable differences between the three groups at the onset of the study.

Table 4.

Pretest Means and Standard Deviations for Number of Absences

	<u>Transformed Number of Absences</u>		
	Mean	Standard Deviation	<u>n</u>
Writing Experimental Group	1.74	1.45	15
Writing Control Group	2.93	1.95	16
No Writing Control Group	2.50	2.03	17
For entire sample	2.41	1.86	48

Once it was ascertained that the groups were equivalent with respect to overall grade point average and attendance during Time 1, the researcher proceeded to test the

original research hypotheses. In the following pages, test results for the research hypotheses are presented. For each hypothesis, results of Box's test of the variance-covariance will be provided.

Hypotheses 1-3: Participants who divulged traumatic experiences in written format (the experimental writing would achieve higher grade point averages at year's end, fewer absences, and lower BASC-ESI T scores than the writing control group or nonwriting controls who continued with traditional therapy and did not engage in a writing task

Table 5.

Pretest Means and Standard Deviations for Overall Grade Point Average

<u>Overall Grade Point Average</u>			
	Mean	Standard Deviation	n
Writing Experimental Group	78.31	8.96	15
Writing Control Group	81.37	7.95	16
No Treatment Control Group	79.51	11.39	17
For entire sample	79.75	9.48	48

Table 6.

Pretest Multivariate Test of Significance

<u>Effect</u>	<u>Wilks'Λ</u>	<u>F</u>	<u>Hypoth. df</u>	<u>Error df</u>	<u>p</u>
Writing Condition	.895	1.25	4	88	.294

Note. Alpha set at .01 for all multivariate analyses.

With alpha set at .01, the multivariate test for equality of variance covariance matrices across groups indicated equality (Box's $M = 23.22$, $F = 1.74$, $df = 12, 9563$, $p = .051$). The analysis continued. Means and standard deviations for the transformed absences, overall grade point average, and the transformed BASC-ESI T scores at the posttest are presented in Tables 7-9. As seen in Table 10, with an alpha level of .01, the results of the analysis revealed an insignificant overall multivariate F (Wilks' $\Lambda = .830$, $F = 1.40$, $df = 6, 86$, $p = .223$). This suggests that the writing treatment had no significant effect on the experimental writing group as compared to the controls. It appeared that the experimental group and control groups were very similar in their absences, overall grade point average, and BASC-ESI scores at the Time 2 measure.

Table 7.

Posttest Means and Standard Deviations for Number of Absences

	<u>Transformed Number of Absences</u>		
	Mean	Standard Deviation	<u>n</u>
Writing Experimental Group	1.58	1.44	15
Writing Control Group	3.20	1.90	16
No Writing Control Group	2.33	1.75	17
For entire sample	2.39	1.80	48

Table 8.

Posttest Means and Standard Deviations for Overall Grade Point Average

	<u>Overall Grade Point Average</u>		
	Mean	Standard Deviation	<u>n</u>
Writing Experimental Group	80.05	7.66	15
Writing Control Group	80.56	6.93	16
No Treatment Control Group	80.08	11.64	17
For entire sample	80.23	8.89	48

Table 9.

BASC Means and Standard Deviations

	<u>Transformed BASC-ESI T scores</u>		
	Mean	Standard Deviation	<u>n</u>
Writing Experimental Group	7.04	.60	15
Writing Control Group	7.44	.81	16
No Writing Control Group	7.33	.62	17
For entire sample	7.27	.69	48

Table 10.

Posttest Multivariate Test of Significance

Effect	Wilks' Λ	F	Hypoth. df	Error df	p
Writing Condition	.830	1.40	6	86	.223

Note. Alpha set at .01 for all multivariate analyses.

Hypothesis 4: After writing about traumatic experiences, the experimental group would demonstrate an improvement in overall grade point average and attendance from Time 1 to Time 2 as compared to the control groups

The final hypothesis predicted that there would be significant differences for the experimental writing group in Time 1-Time 2 Attendance scores ($d'a$) and Time 2 -Time 1 overall grade point average scores ($d'g$) as compared to the $d'a$ scores and $d'g$ scores of the control groups. With alpha set at .01, the multivariate test for equality of variance-covariance matrices across groups indicated that the variances were not different enough to pose a problem in the interpretation of the F test (Box's $M= 14.108$, $F = 2.20$, $df = 6$, 46874, $p = .04$).

To assess the effects of the treatment variable from Time 1 to Time 2, an overall MANOVA was performed with writing condition as the independent measure and the difference scores for attendance and overall grade point averages as the dependent measures. As in the test for homogeneity of variance-covariance matrices, the difference scores for all three groups were calculated by subtracting Time 1- Time 2 Attendance scores ($d'a$) and Time 2 - Time 1 overall grade point average scores ($d'g$). Tables 11 and

12 list the means and standard deviations for the d' scores. With an alpha level of .01, the results of the analysis revealed an insignificant overall multivariate F as listed in Table 13. This analysis found no significant differences between the three groups on their overall grade point average and number of absences over the time period from Time 1 to Time 2 (Wilks' $\Lambda = .959$, $F = .468$, $df = 4, 88$, $p = .759$). This indicates that the treatment had no effect on the experimental writing group over the course of two consecutive grading periods. All three groups performed similarly with respect to their grades and absences from Time 1 to Time 2.

Table 11.

Means and Standard Deviations for the Difference Scores on Overall Grade Point Average

<u>d' Overall Grade Point Average</u>			
	Mean	Standard Deviation	<u>n</u>
Writing Experimental Group	1.73	6.99	15
Writing Control Group	-.80	8.20	16
No Writing Control Group	.56	7.34	17
For entire sample	.47	7.45	48

Note. Mean scores for Time 2 - Time 1 Overall Grade Point Average

Table 12.

Means and Standard Deviations for the Difference Scores On Attendance

<u>Transformed d' Attendance</u>			
	Mean	Standard Deviation	n
Writing Experimental Group	.16	.82	15
Writing Control Group	-.27	2.00	16
No Writing Control Group	.17	1.42	17
For entire sample	2.07	1.48	48

Note. Mean scores for Time 1-Time 2 Attendance scores

Table 13.

Multivariate Test of Significance for the Difference Scores On Attendance and Overall Grade Point Average

<u>Effect</u>	<u>Wilks' Λ</u>	<u>F</u>	<u>Hypoth. df</u>	<u>Error df</u>	<u>p</u>
Writing Condition	.959	.468	4	88	.759

Note. Alpha set at .01 for all multivariate analyses.

CHAPTER IV

DISCUSSION

This study expanded on the traditional writing paradigm using an adolescent population. If the results were consistent with previous studies on adult populations then after writing about emotional experiences, the experimental writing group would have differed from the control groups in regard to behavioral and emotional functioning, grades, and number of absences from school. The subjects assigned to the experimental writing condition were anticipated to demonstrate superior functioning as compared to the controls as indicated by the BASC-ESI. As recalled from the instrumentation section, the ESI is a composite score from scales that tap clinical maladjustment, school maladjustment, and personal adjustment. Additionally, subjects in the experimental group were expected to have fewer absences and higher grades than controls. The research hypotheses were not supported. At the time these data were collected at Time 2, writing about traumatic events did not appear to have an effect on the experimental writing group's overall grades, emotional distress as measured by the BASC, or their number of absences from school. Additionally, there was no improvement over time regarding grades and attendance for the experimental writing group as compared to the controls. Implications of these findings are discussed.

Although writing about traumatic experiences has previously demonstrated efficacy in adult populations, little formal research has been conducted with adolescents or emotionally disturbed individuals. Pennebaker (1990) discussed the possible limitations of writing with extremely distraught individuals and contends that “for people who are deeply distressed and unable to cope effectively, therapy is often the only realistic alternative” (p. 197). It is possible that writing about traumatic events for two sessions was not sufficient enough to promote change within emotionally disturbed adolescents.

These findings suggest that ED adolescents do not benefit from writing about their traumatic experiences in Special Education counseling. Cameron and Nicholls (1998) state that not everyone benefits from the writing process. Some individuals ruminate about their traumatic experiences which inhibits the development of appropriate coping strategies. Conversely, other individuals who participate in the disclosure writing task develop insight and adaptive coping when forced to develop cognitive representations of stressful situations (Cameron & Nicholls, 1998).

Many of the participants in the current study had a history of horrific abuse, neglect, domestic violence, and seriously dysfunctional family dynamics. As Pennebaker et al. (1997) maintain, “traumatic experiences... can affect psychological functioning on many levels” (p. 863). Larson and Chastain (1990) claim that the most painful or traumatic experiences are often concealed. Additionally, Spera et al. (1994) contend that events that are humiliating or embarrassing may not be disclosed. Possibly, the kinds of experiences these adolescents endured were more severe than they were willing to express on paper.

Revealing secrets can have disturbing consequences, such as being rejected and alienated from the listener (Kelly & McKillop, 1996). Even though they were assured their counselors would not read about their traumatic experiences, the subjects may have believed otherwise and subsequently perceived potential rejection. Because the participants may have doubted their essays would remain unread they may not have disclosed their most traumatic and upsetting experiences. In fact, many of the participants asked what would become of their writings and wanted to know when their essays would be shredded. One participant repeatedly reinforced the envelope seal after inserting his writings, double checking to ensure that the envelope was tightly sealed.

Czajka (1987) conducted a study that, in part, addressed the issue of disclosing in a permanent manner versus writing when the content would never be read. Czajka was interested in the physiological correlates of inhibiting disclosure versus confiding. Twenty four ($N=24$) undergraduate students were asked to write about traumatic and positive events in addition to writing about trivial events. Measures of heart rate, blood pressure, and skin conductance levels were taken throughout the writing and baseline time periods. One distinguishing factor of this study as compared to other writing studies was that some of the subjects wrote on legal pads while others wrote on “magic boards” (where the writing disappears permanently when the writer lifts the plastic writing cover). Czajka believed that subjects who wrote on legal pads would disclose less because their writings would be saved in a permanent manner. Conversely, it was predicted that the subjects writing on magic boards would disclose more fully because their writings would not leave

a permanent record. In line with a theory of inhibition, it was hypothesized that subjects writing on legal pads would have higher overall skin conductance levels because they would inhibit their emotional reactions at a higher level than those writing on erasable magic boards. As recalled from the previous review of the literature, emotional inhibition requires physiological work (Pennebaker, 1990). The magic board subjects were hypothesized to have lower overall skin conductance levels because of increased privacy concerning their writings and the assumption that they would inhibit their emotional reactivity less. Writing on the erasable magic boards was believed to increase freedom of expression. Writing on legal pads was thought to reduce privacy and subsequent expression levels.

Czajka (1987) determined that there were no statistically significant differences between the magic board and legal pad group's skin conductance measures. Although not statistically significant, the skin conductance levels for the magic board group remained lower throughout the study. Czajka maintains that the magic board group may have felt less inhibited in their expression of emotions since they reported their essays to be of a more personal nature than the legal pad group's essays. It was speculated that the magic board group felt more privacy and less stress while writing. Czajka concluded that it would be useful to examine the variables surrounding confiding through a permanent record versus writing when the content will never be seen.

The current investigation fails to support the contention that writing privately would be of greater benefit. Recall that in the present study, none of the writing samples

were read. The participants were assured verbally and in written format that their unread essays would be immediately shredded and that no one would ever read the contents of their writings. Perhaps because the adolescents knew that their writings would remain unread they did not disclose events that were truly upsetting or traumatic to them. From an empirical standpoint, it would have made sense to collect the essays and examine them for content to ensure the instructions were followed through. Interestingly, several participants expressed disappointment that their unread essays would be shredded.

On the other hand, it is possible that the subjects in the current investigation disclosed less about their traumatic experiences because they wrote on paper. Perhaps the adolescents perceived that a record of their disclosure would be permanent, rather than discarded as promised. Recall that Czajka (1987) found some support to indicate that subjects writing on legal pads disclosed less than subjects writing on magic boards theoretically because the legal pads left a permanent record.

Are certain intervention strategies touted as being more effective than others? Prout and Prout (1998) explored the efficacy of school based counseling and psychotherapy interventions in the schools in a recent meta-analysis. Seventeen studies published within the last 10 years were used in the analysis. The primary findings advocate the use of school-based therapeutic interventions. When compared to students in the schools who did not receive treatment, the students who were treated were found to have improved at a significantly higher rate. Of interest, the meta-analysis supported the use of group interventions as the treatment of choice for troubled students. In line with these

findings, the adolescents in the experimental writing group may have benefited if they engaged in the disclosure writing within group format. The meta-analysis also demonstrated differential effectiveness for interventions at the elementary versus middle and high school levels. Prout and Prout reported that elementary students appear to be most responsive to treatment “with perhaps more modest expectations with older students” (p.113). This finding is consistent with the results of the present study in that the middle and high school students did not appear to improve in regard to grades, absences, and BASC scores as a result of engaging in the experimental writing exercise.

It is possible that the treatment was not powerful enough to have made an impact on the ED participants. Yeaton and Sechrest (1981) discuss the variables surrounding the strength of treatment. Strength of treatment is defined as the “a priori likelihood that the treatment could have its intended outcome” (p.156). According to Yeaton and Sechrest, practitioners often err in their choice of treatment strength. Conceivably, the present study used a treatment that was too weak to modify emotional distress, grades, and absences. Furthermore, it is speculated by Yeaton and Sechrest that an individual with an accumulated history of strong treatment interventions may be immune to weak treatment strategies. In the current investigation a substantive number of the participants have been diagnosed and treated for mental health problems for several years. In addition to school based interventions, many of the participants were receiving private therapy outside of the school setting, pharmacotherapy, and/or family counseling. Because of the multitude of prior interventions, the adolescents may have become “immune” to an additional

psychotherapeutic intervention and writing about their traumatic experiences for two sessions may not have been strong enough to produce statistically significant effects.

Although the findings of the present study did not support the writing paradigm with ED adolescents, the results of the study can be used as a platform for additional research with a similar objective. Future studies can refine the methodology based upon the present limitations in hopes of securing an effective treatment modality. Although the research hypotheses were not supported, they provide evidence for the continued need to explore new therapeutic techniques for this group of troubled individuals.

Limitations of this Study and Its Implications for Further Research in School Psychology

The most fundamental limitation of the present study is that the writing essays were never examined for content. This ultimately may have influenced the integrity of the treatment (Yeaton & Sechrest, 1981) in that participants may have failed to comply with the instructions as stated in Appendices E and G. Future writing studies with ED adolescents should exert effort to retain the completed essays. The purpose of collecting the writing samples is twofold. First, the participants would conceivably be more likely to comply with the instructions because of any ramifications from noncompliance. Second, the researcher would be able to examine the essays for content to ensure that trauma is indeed reported. An additional limiting factor of the present investigation is that treatment integrity was not examined for any of the conditions. Thus, the content of the counseling sessions remains unknown. It also remains uncertain as to what type of counseling technique(s) were used and from which theoretical orientations.

Second, although Pennebaker (1997) maintains that variables such as age have not been found to relate to outcome measures, there are clearly developmental differences between the range of students (12-17 years of age) used for this investigation. Future studies might expand on this research and account for developmental differences by obtaining a more age homogeneous sample of ED adolescents.

Another limitation of the current study is that participants were difficult to recruit. Many parents did not want to expose their children to a writing scenario that could potentially produce emotional arousal. As recalled from Appendix E, parents were fully informed of the procedures that would be used in the study. In addition, an incomplete data set was obtained for some subjects due to incarceration and expulsions. Consequently, the resultant data base is marginal with respect to the absolute size. Because some subjects provided incomplete data it was necessary to preserve all of the data by using a mean substitution for the missing data points. This allowed the experimenter to maintain the maximum number of participants without influencing the statistical character of each variable.

It may have added value to the study to create an additional level for the independent measures. This level could consist of a group of ED adolescents who would be asked to verbalize their traumatic experiences for 30 minutes over two sessions. In the current investigation, the group receiving traditional “talk” therapy (the nonwriting control group) did not fare better than the experimental writing group at Time 2. However, this nonwriting control group was not instructed to describe traumatic experiences. Previous

psychotherapy demonstrated that talking is superior to writing about traumatic experiences although both are superior to writing about trivial events (Murray et al., 1989). A surprising finding of this study is that none of the interventions had any effect. All three groups of ED participants performed very similarly from Time 1 to Time 2, despite intervention. From a theoretical standpoint, it would seem that some improvement would have been documented due to intervention. These data do not support this contention. This finding may have to do with the sensitivity of the current dependent measures or perhaps the treatment integrity of counseling. As recalled from the previous review of the literature, psychotherapy with feedback is believed to differ from writing about upsetting experiences in several ways. Murray et al. found that subjects assigned to talk about their upsetting experiences fared better on adaptive, cognitive and self-esteem measures. Future investigations with ED adolescents might mimic the Murray et al. study to determine if talking about trauma would be superior to writing.

As mentioned previously, the use of two 30-minute writing sessions could be construed as a weak manipulation. Subsequently, treatment effects may have been obtained with more extensive interventions. Yeaton and Sechrest (1981) believe that for some treatments, the only dimension of strength that can be varied is duration. For example, the effects of psychotherapy can be strengthened by doing more of the same. Possibly, the effects of writing about traumatic events could have been strengthened by having the students write over a longer period of time. In fact, Smyth's (1996) meta-analysis found a trend to suggest that the more days over which the writing experiment

lapses, the stronger the effects (as cited in Pennebaker, 1997). Perhaps significant effects would have been realized if the participants in the current investigation wrote about traumatic experiences on a number of different occasions throughout the school year. Future studies of a similar nature might expand the timeframe in which ED adolescents engage in the writing exercise.

From a practical standpoint, many of the participants stated that they enjoyed writing and that would prefer writing to talking with their counselors about the events in their lives that have been upsetting to them. However, this response varied across the participants. Some, struggled with the writing exercise and complained about disclosing their upsetting experiences in written format.

Although present measures of attendance and grades did not indicate a treatment effect, follow up studies might reveal that writing about trauma did indeed impact these measures of school performance. Pennebaker has found treatment effects several months after the writing study, although they typically diminish in the subsequent months of writing (Francis & Pennebaker, 1992; Pennebaker et al., 1990). At the time consent was sought for this study, permission was granted for the investigator to have access to the student's files for a period of two years. Further research is needed to reexamine the participant's grades and absences in order to determine if writing about traumatic experiences had any long term effects.

References

- Achenbach, T.M. (1991). Manual for the Child Behavior Checklist/4-18 and 1991 Profile. Burlington: University of Vermont, Department of Psychiatry.
- American Psychological Association. (1992). Ethical principles of psychologists and code of conduct. American Psychologist, 47, 1597-1611.
- Bower, B. (1997, May 17). Health may succumb to grief reaction. Science News, 151, 301.
- Breuer, J., & Freud, S.(1895/1955) Studies on hysteria. In J. Strachey (Ed.), The complete works of Sigmund Freud. London: The Hogarth Press.
- Cameron, L.D., & Nicholls, G. (1998). Expression of stressful experiences through writing: Effects of a self-regulation manipulation for pessimists and optimists. Health Psychology, 17(1), 84-92.
- Cole, S.W., Kemeny, M.E., Taylor, S.E., & Visscher, B.R. (1996). Elevated physical health risk among gay men who conceal their homosexual identity. Health Psychology, 15(4), 243-251.
- Czajka, J.A. (1987). Behavioral inhibition and short term physiological responses. Unpublished master's thesis. Southern Methodist University, Dallas, TX.
- Doyle, A., Ostrander, R., Skare, S., Crosby, R.D., & August, G.J. (1997). Convergent and criterion-related validity of the Behavior Assessment System for Children-Parent Rating Scale. Journal of Clinical Child Psychology, 26(3), 276-284.
- Education of All Handicapped Children Act, 20 U.S.C. Sec. 1400 et seq. (1975).

Egyed, C.J., McIntosh, D.E., & Bull, K.S. (1998). School psychologists' perceptions of priorities for dealing with the dropout problem. Psychology in the Schools, 35(2), 153-162.

Esterling, B.A., Antoni, M.H., Fletcher, M.A., Margulies, S., & Schneiderman, N. (1994). Emotional disclosure through writing or speaking modulates latent Epstein-Barr antibody titers. Journal of Consulting and Clinical Psychology, 62(1), 130-140.

Francis, M.E., & Pennebaker, J.W. (1992). Putting stress into words: The impact of writing on physiological, absentee, and self-reported emotional well-being measures. American Journal of Health Promotion, 6(4), 280-287.

Goleman, D. (1995). Emotional intelligence. New York: Bantam Books.

Greenberg, M.A., & Stone, A.A. (1992). Emotional disclosure about traumas and its relation to health: Effects of previous disclosure and trauma severity. Journal of Personality and Social Psychology, 63(1), 75-84.

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 and Social Psychology, 71(3), 588-602.

Gross, J.J. & Levenson, R.W. (1997). Hiding feelings: The acute effects of inhibiting negative and positive emotion. Journal of Abnormal Psychology, 106(1), 95-103.

Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1995). Multivariate data analysis. Englewood Cliffs, N.J.: Prentice Hall.

Individuals with Disabilities Act. (1990). Public Law 101-476. 20 U.S.C. 1401.

Journal of the American Medical Association. (1992). The changing rate of major depression: Cross-national comparisons. Journal of the American Medical Association, 268(21), 3098-3105.

Kazdin, A.E., & Johnson, B. (1994). Advances in psychotherapy for children and adolescents: Interrelations of adjustment, development, and intervention. Journal of School Psychology, 32, 217-246.

Kelly, A.E., & McKillop, K.J. (1996). Consequences of revealing personal secrets. Psychological Bulletin, 120(3), 450-465.

Kingery, P.M., Coggeshall, M.B., & Alford, A.A. (1998). Violence at school: Recent evidence from four national surveys. Psychology in the Schools, 35(3), 247-258.

L'Abate, L. (1991). The use of writing in psychotherapy. American Journal of Psychotherapy, XLV(1), 87-98.

Larson, J. & Busse, R.T. (1998). Specialist-level preparation in school violence and youth gang intervention. Psychology in the Schools, 35(4), 373-379.

Larson, D.G., & Chastain, R.L. (1990). Self-concealment: Conceptualization, measurement, and health implications. Journal of Social and Clinical Psychology, 9, 439-455.

Lewinsohn, P.M., Hops, H., Roberts, R.E., Seeley, J.R., & Andrews, J.A. (1993). Adolescent psychopathology: I. Prevalence and incidence of depression and other DSM-III-R disorders in high school students. Journal of Abnormal Psychology, 102(1), 133-144.

Lutgendorf, S.K., Antoni, M.H., Kumar, M. & Schneiderman, N. (1994). Changes in cognitive coping strategies predict EBV-antibody titre change following a stressor disclosure induction. Journal of Psychosomatic Research, 38(1), 63-78.

Merenda, P.F. (1996). BASC: Behavior Assessment System for Children. Measurement and Evaluation in Counseling and Development, 28, 229-232.

Mesters, I., Van Den Borne, H., McCormick, L., Pruyn, J., De Boer, M., & Imbos, T. (1997). Openness to discuss cancer in the nuclear family: Scale, development, and validation. Psychosomatic Medicine, 59, 269-279.

Murray, E.J., Lamnin, A.D., & Carver, C.S. (1989). Emotional expression in written essays and psychotherapy. Journal of Social and Clinical Psychology, 8(4), 414-429.

Nichols, M.P., & Efran, J.S. (1985). Catharsis in psychotherapy. Psychotherapy, 22(1), 46-58.

Pennebaker, J.W. (1985). Traumatic experience and psychosomatic disease: Exploring the roles of behavior inhibition, obsession, and confiding. Canadian Psychology, 26, 82-95.

Pennebaker, J.W. (1990). Opening up: The healing power of expressing emotions. New York: The Guilford Press.

Pennebaker, J.W. (1993). Putting stress into words: Health, linguistic, and therapeutic implications. Behaviour Research and Therapy, 31(6), 539-548.

Pennebaker, J.W. (1997). Writing about emotional experiences as a therapeutic process. Psychological Science, 8(3), 162-166.

Pennebaker, J.W., Barger, S.D., & Tiebout, J. (1989). Disclosure of traumas and health among holocaust survivors. Psychosomatic Medicine, 51, 577-589.

Pennebaker, J.W. & Beall, S. (1986). Confronting a traumatic event; Toward an understanding of inhibition and disease. Journal of Abnormal Psychology, 95, 274-281.

Pennebaker, J.W., Colder, M., & Sharp, L.K. (1990). Accelerating the coping process. Journal of Personality and Social Psychology, 58(3), 528-537.

Pennebaker, J.W., & Francis, M.E. (1996). Cognitive, emotional, and language processes in disclosure. Cognition and Emotion, 10(6), 601-626.

Pennebaker, J.W., Mayne, T.J., Francis, M.E. (1997). Linguistic predictors of adaptive bereavement. Journal of Personality and Social Psychology, 72(4), 863-871.

Pennebaker, J.W., & O'Heeron, R.C. (1984). Confiding in others and illness rate among spouses of suicide and accidental-death victims. Journal of Abnormal Psychology, 93(4), 473-476.

Petrie, K.J., Booth, R.J., & Pennebaker, J.W. (1998). The immunological effects of thought suppression. Journal of Personality and Social Psychology, 75(5), 1264-1272.

Petrie, K.J., Booth, R.J., Pennebaker, J.W., Davison, K.P., & Thomas, M.G. (1995). Disclosure of trauma and immune response to a Hepatitis B vaccination program. Journal of Consulting and Clinical Psychology, *63*(5), 787-792.

Prout, S.M., & Prout, H.T. (1998). A meta-analysis of school-based studies of counseling and psychotherapy: An update. Journal of School Psychology, *36*(2), 121-136.

Reynolds, C.R., & Kamphaus, R.W. (1992). Behavior assessment system for children (BASC) manual. Circle Pines: American Guidance Service, Inc.

Roemer, L. & Borkovec, T. D. (1994). Effects of suppressing thoughts about emotional material. Journal of Abnormal Psychology, *103*(3), 467-474.

Sandoval, J., & Echandia, A. (1994). Behavior Assessment System for Children. Journal of School Psychology, *32*(4), 419-425.

Spera, S., Buhrfeind, E.D., Pennebaker, J.W. (1994). Expressive writing and coping with job loss. Academy of Management Journal, *37*(3), 722-733.

Thomas, S.P. (1997a). Angry? Let's talk about it! Applied Nursing Research, *10*(2), 80-85.

Thomas, S.P. (1997b). Women's Anger: Relationship of suppression to blood pressure. Nursing Research, *46*(6), 324-330.

Weinfurt, K.P. (1996). Multivariate analysis of variance. In L.G. Grimm, & P.R. Yarnold (Eds.), Reading and understanding multivariate statistics (pp. 245-276).

Washington, D.C.: American Psychological Association.

Wright, J.W. (1998). Population by race and Hispanic origin. In The New York Times 1998 Almanac (p. 268). New York: Penguin Group.

Yeaton, W.H., & Sechrest, L. (1981). Critical dimensions in the choice and maintenance of successful treatments: Strength, integrity, and effectiveness. Journal of Consulting and Clinical Psychology, 49(2), 156-167.

APPENDICES

APPENDIX A

Letter to Director of Special Education in LISD

December 2, 1998

Ms. Jo Haney
Executive Director of Special Education
400 West Main Street
Lewisville, Texas 75057

Dear Ms. Haney;

My name is Cathy Evans (you may recognize my name; I am one of the psychology interns with LISD.) I am really enjoying my learning experiences in Lewisville and I am eager to graduate with my Ph.D. this summer.

Since I am nearing the completion of my program, I am in the process of determining a dissertation topic. My interest in the power of disclosing emotional experiences. A significant amount of literature supports the use of writing to alleviate emotional distress. Following are some of the findings:

- long term improvements in mood (lowered depression and distress)
- behavioral changes (higher grade point averages and reemployment following job loss)
- fewer absences from work
- physiological improvements

Based upon the benefits of writing, I am hypothesizing that writing could be one way to address the difficulties faced by emotionally disturbed adolescents (ages 13 and older). For my study, I am hoping to obtain as large a sample size as possible (perhaps 75-100 children identified as ED). The experiment is straightforward; two groups will be assigned to either a control or experimental condition. The control group will write about superficial topics (they might write about what they did since they woke up that morning) for 15 minutes once a week for one month. The experimental group will write about their very deepest thoughts and feelings regarding an important emotional issue for the same time period. None of the writers will receive feedback about their writings. At the end of the 15 minutes, the subjects will place their writings in an anonymous box that the experimenter will collect.

2 months after the writing; I will examine the following with each of the subjects: 1) visits to the school nurse (I am hypothesizing the experimental groups will be less) 2) grades (higher for the experimental group) 3) absences (less for the experimental group) 4) lowered amounts of emotional turmoil as indicated by a self-report measure.

If my hypotheses are supported, writing, independent of social feedback might be one way to assist in the improvement of children with emotional difficulties. Of course, if I find improvement in the experimental group, I will offer the treatment condition to the adolescents assigned to the control group as well.

I am hoping to speak with you regarding the possibility of conducting such research in LISD. In particular, I am interested in seeking your assistance in the pursuit of this project. Before I pursue this study any further, I would really appreciate your suggestions and/or thoughts. Should the proposed study meet your approval, it is important to add that my methodology would be carefully scrutinized by the Human Subjects Review Board at Texas Woman's University to ensure stringent ethical guidelines. I look forward to your response.

Sincerely,

A handwritten signature in cursive script that reads "Cathy Evans". The signature is written in black ink and is positioned to the right of the typed name.

Cathy Evans

cc: S. Jamieson

APPENDIX B

Letter Granting Permission to Collect Data in LISD

400 West Main Street
Lewisville, Texas 75057
(972) 219-3892 Phone
(972) 436-8042 Fax

From the Office of : Special Education

February 9, 1999

Dr. Jerry Wilkerson, Chair
Human Subjects Review Committee
Texas Woman's University
P.O. Box 425619
Denton, Texas 76204-5619

Dear Dr. Wilkerson;

Please let this serve as written confirmation for Ms. Catherine Evans to collect data in the Lewisville Independent School District. Ms. Evans will be conducting research with adolescents identified as having an Emotional Disturbance (ED). As I understand it, the participants in the study will be exposed to one of three treatment conditions (writing about emotional events, writing about trivial events, or no writing). The data gathering phase of the study is anticipated to occur over a two to three month period. We are hopeful that the writing treatment might be of benefit to adolescents with ED. Ms. Evans will be responsible for obtaining informed consent from each participant and his or her parent prior to the onset of the study.

If you have any questions or require additional information, feel free to contact me.

Sincerely,



Jo Haney
Executive Director Of Special Education

APPENDIX C

Letter used to introduce study to Counselors

400 West Main Street
Lewisville, Texas 75057
(972) 219-3892 Phone
(972) 436-8042 Fax

From the Office of : Special Education

February 10, 1999

Dear Special Education Counselor;

I recently received an approval from Jo to begin research in LISD that will explore the effects of journal writing on adolescents ages 13-18 identified as Emotionally Disturbed (ED). Adolescents in the study will be exposed to one of three treatment conditions (writing about emotional events, writing about superficial topics, or no writing). I am writing to you because I am hoping to get some type of idea of which counselors might be willing to participate. Basically, what it would entail from you would be to **continue with** your regular counseling sessions. If you are interested, the kids you meet with **would complete a** behavior ratings scale - it usually takes about 15-20 minutes to fill this out). Additionally, some participants will be asked to write about various topics. I will provide paper, pens, and envelopes. If you participate, all that I ask is that you return the envelopes to me.

I know you are busy, so I am trying to make it as manageable as possible. Attached are the students at your schools that are eligible for the study (ages 13-18, ED as primary handicapping condition, no LD in written expression, and receive counseling as a related service). If you are interested in having any of your adolescents participate, I have attached a tentative letter that would go out to parents (I thought that if the letter came from you it might receive a more favorable response). I welcome your thoughts on this draft letter.

You may wonder what benefit this study might have. Well, research has shown all kinds of benefits to writing including behavioral, physiological, and emotional. This might be interesting for you because you will be able to track the effects of traditional forms of counseling with an adjunct (writing). If I do detect treatment effects. this may show that writing may be a useful tool when working with ED kids.

I am attending your next counselor's meeting on February 24th, to discuss the study in more detail. In the meantime, could you let me know either way if you might be interested? Thanks for considering this. and I look forward to your response.

Sincerely,

Cathy Evans, Psychology Intern

cc: V. Abshier
J. Haney

APPENDIX D

Letter used to recruit participants

400 West Main Street
Lewisville, Texas 75057
(972) 219-3892 Phone
(972) 436-8042 Fax

From the Office of : Special Education

March 1, 1999

Dear Parents of _____;

A colleague of mine who is presently working on a Ph.D. from Texas Woman's University is conducting research on writing and/or counseling on the junior high and high school experience and is recruiting participants ages 13-18. I was wondering if you might be interested in having _____ participate in the study. In addition to our regularly scheduled counseling session, it would entail completing a questionnaire (taking 15-20 minutes to complete) and possibly writing for 30 minutes for two sessions. A summary the research findings will be mailed to all participants and their parents. The attached form has all the details. Please note, space in the study is limited to the first 51 respondents. So, if you are interested, please sign the attached permission form and return in the enclosed self-addressed, stamped envelope at your earliest convenience. Thank you for your consideration.

Sincerely,

Special Education Counselor

APPENDIX E

Parent Consent Form

TEXAS WOMAN'S UNIVERSITY
SUBJECT CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: The Effects of Writing and/or Counseling on Junior and High School Experiences

Name of Investigators: Cathy Evans, M.A. & Advisor: Dinah Graham, Ph.D.

75

Phone Numbers: (972) 219-3892 or (940) 898-2303

I understand that by signing below I am agreeing to allow my child to participate in a research study designed to examine the effects of writing and/or counseling on junior and high school experiences. The study will take place at my child's school with his or her Special Education counselor on approximately three occasions. I understand that this will occur over a two month period, 30 minutes each time. I understand that all participants currently receive Special Education counseling. Participants will be asked to engage in their regular counseling session and/or write about various topics. Those who write will be asked to write about either a traumatic or upsetting experience that has occurred in their lives, or about other topics, such as what they have done since waking that morning. Participants will complete one questionnaire at the end of the study that should take approximately 15-20 minutes to complete. I also understand that the investigator will have access to my child's progress reports/grades for a period of two years; this information will be held confidential and will be used only to monitor each participant's school performance as a result of participation in the research.

A benefit of partaking in the study may include receiving a summary of the findings of the study. The researchers will try to prevent any problem that could happen because of this research. I should let the researchers know at once if there is a problem and they will help my child. I understand, however, that TWU does not provide medical services or financial assistance for injuries that might happen because my child is taking part in this research.

This study may involve risks and/or discomfort which include the possibility of emotional distress resulting from writing about emotional events, the possibility of emotional distress resulting from fear of self-disclosure, and the possibility of breach of confidentiality. To protect each participant from these risks, participants will have the option of discussing any emotional discomfort with their counselors. Participants will also be instructed that they are not required to discuss their writings and that their counselors will not read what they write. Additionally, participants will be instructed that at any time they may discontinue the writing task. For those participants who are asked to write, instructions will be provided so that it is understood that no one will ever read what they disclose on paper. The unread essays will be immediately destroyed by a paper shredder. Participants will be instructed not to include their names or identifying information on any writing materials or questionnaires and will be identified by number only. I understand that these data will be stored in a locked cabinet in the investigator's home for two years, after which they will be destroyed by a paper shredder.

If I have any questions about the research study I should ask the researchers: their phone numbers are at the top of this form. If I have questions about my child's rights as a subject or the way this study has been conducted, I may call Ms. Tracy Lindsay in the Office of Research & Grants Administration at (940) 898-3377. I understand that my child's participation in this study is voluntary and that I may withdraw him/her from the study at any time. My child may also withdraw from the study at any time. My refusal to have my child participate will involve no penalty or loss of benefits to which he or she may otherwise be entitled. An offer has been made to answer all of my questions and concerns about the study. I will be given a copy of the dated and signed consent form.

Signature of Participant's Parent

Date

Signature of Participant

Date

Signature of Investigator

Date

APPENDIX F

Instructions for the Experimental Writing Group

Instructions for the Experimental Writing Group

For the next thirty minutes, please write about one of the most upsetting experiences that has happened to you in your life. This topic might be a difficult or upsetting event (such as the death of a relative or pet), or a topic related to a close relationship or friendship (such as an argument with someone or having your best friend move away). If possible, this topic should be something that you have not talked about with very many people. Also, the topic should be something that still bothers you and that you still think about sometimes. **Please use as many emotion words and feelings (such as sad, angry, happy) as you can in describing how you felt or still feel about this topic.** Once you start writing, keep writing. You do not need to pay attention to spelling or grammar. You are not required to discuss with your counselor what you have written and no one will ever read what you write. What you write will never be tied to you. When you are finished, please enclose this paper in the envelope provided.

APPENDIX G

Instructions for the Writing Control Group

Instructions for the Writing Control Group

For the next thirty minutes, please write about what you have done in the past 24 hours.

Try to remember as many details as you can. **Please do not use any emotion words (such as sad, angry, or happy) while you write.** You might write about what you had for dinner last night, the time you went to bed, what you did since you woke up this morning, any television shows you watched, or any music that you may have listened to. The important thing is to try to remember as many details as you can. Once you start writing, keep writing. You do not need to pay attention to spelling or grammar. You are not required to discuss with your counselor what you have written and no one will ever read what you write. What you write will never be tied to you. When you are finished, please enclose this paper in the envelope provided.