

A COMPARISON OF EXPRESSIVE WRITING EFFECTS ON BODY IMAGE:
SYMPTOMATIC VS. ASYMPTOMATIC WOMEN

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Jondell Lafont, B.A.

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Committee Members Approved:

Crystal D. Oberle, Chair

Joseph L. Etherton

Natalie A. Ceballos

Approved:

J. Michael Willoughby
Dean of the Graduate College

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ABSTRACT

A COMPARISON OF EXPRESSIVE WRITING EFFECTS ON BODY IMAGE: SYMPTOMATIC VS. ASYMPTOMATIC WOMEN

by

Jondell Lafont, M.A.

Texas State University—San Marcos

May 2011

SUPERVISING PROFESSOR: CRYSTAL OBERLE

Misperception or distortion of body image is often related to development of an eating disorder. This symptom is so often associated with eating disorders that the American Psychiatric Association (2000) includes “a disturbance in perception of body shape and weight” (p. 583) as an essential feature of both anorexia and bulimia. The aim of this study was to compare body image perceptions between women who have high eating disorder symptomatology and women who have low eating disorder symptomatology before a writing task, after a writing task, and one month later. Ninety-two female undergraduates with a mean age (\pm SD) of 19.15 ± 1.74 years and a self-reported body mass index (BMI) of 23.39 ± 4.78 participated in the study. Results from three ANCOVAs (one for each dependent variable: ideal figure, current figure, and figure

that men would prefer) showed that only the mean rating for the current figure (figure deemed as the one closest to the participants' current figure) was affected by the writing task. In the high symptomatology group, the mean rating for the current figure decreased after the writing task and became closer to the mean rating of the ideal figure. Based on this research, writing may help improve body image perception up to one month after the writing intervention in women who already have a distorted body image.

CHAPTER I

INTRODUCTION

The aim of this study was to compare body image perceptions between women who are symptomatic and women who are asymptomatic. Symptomatic refers to women who have or have previously had eating disorder symptoms (extreme dietary restriction, bingeing, vomiting, and/or laxative abuse) but are not and have never been clinically diagnosed with an eating disorder. Asymptomatic refers to women who do not have eating disorder symptoms and have never had eating disorder symptoms. This study was unique in that it compared these two groups on figure ratings after an expressive writing task. Further, other researchers have not separated women into groups based on their eating disorder symptom status.

Background

Misperception or distortion of body image is often related to development of an eating disorder. This symptom is so often associated with eating disorders that the American Psychiatric Association (2000) includes “a disturbance in perception of body shape and weight” (p. 583) as an essential feature of both anorexia and bulimia. Women often distort their body in a way in which they see themselves as larger, and this misperception leads to negative feelings about their body image. Previous studies reveal that women overestimate their body size and often view their current figure as larger than what they view as the ideal female figure (Fallon & Rozin, 1985; Lokken et al., 2003;

Rand & Wright, 2000; Rozin & Fallon, 1988). Although past research also indicates that expressive writing has helped individuals with a variety of psychological and physical problems (Eells, 2006; Graf, Gaudiana, & Geller, 2008; Kallay & Baban, 2008; Klein & Boals, 2001; Kuiken, Dunn, & LoVerso, 2008; Low, Stanton, Bower, & Gyllenhammer, 2010; Pachankis & Goldfried, 2010; Pennebaker, Colder, & Sharp, 1990; Pennebaker, Hughes, & O'Heeron, 1987; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Slatcher & Pennebaker, 2006; Sloan, Feinstein, & Marx, 2009; Sloan, Marx, Epstein, & Dobbs, 2008; Smyth, Hockemeyer, & Tullock, 2008; Spera, Buhfreind, & Pennebaker, 1994; Yogo & Fujihara, 2008), there have been few studies investigating the use of expressive writing tasks for improvement in body image. The research that has been conducted on this topic (e.g., Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008; Schmidt et al., 2002) has not shown similar results to previous studies (that expressive writing groups improve more than factual writing groups), but no two researchers have used similar participants or writing tasks.

Problem Statement

Research regarding writing interventions for body image and eating disorder symptomatology has not shown the same results as previous research regarding expressive writing interventions for people with psychological and physical problems. In most of this research (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008), groups, regardless of whether they engaged in expressive or factual writing, seemed to improve. However, this research has been limited and many different methods have been used. No two researchers used the same writing tasks, and some researchers used university students, while others used individuals with eating disorders.

Purpose of the Study

The purpose of this study was to compare women who have high eating disorder symptomatology to women who have low eating disorder symptomatology on figure ratings before, immediately after, and one month after a writing task. This information will allow for comparisons of what these women think is the ideal figure, what figure they think they are currently, and what figure they think men would prefer. This information will also show if expressive writing is actually able to improve body image perception in women of varying symptom levels.

Significance of the Study

The significance of this study is that it showed that women with high eating disorder symptoms do not respond similarly to women with low eating disorder symptoms on a body image questionnaire. It also showed that a writing task improves body image for those in the high symptomatology group. This research could show that there are some women who are more likely to develop an eating disorder and that perhaps a writing task may help these individuals improve their body image.

Overview of Methodology

This study was conducted at Texas State University—San Marcos, using a convenience sample of undergraduate psychology majors. The study was a 2 x 3 x 3 mixed design experiment. The two between-subject factors were symptom level (high symptomatology or low symptomatology) and writing condition (body image, traumatic event, or room control), and the within-subjects factor was time, whereby each participant took a body image questionnaire on three separate occasions (pre-intervention, post-intervention, and one month later). Participants were asked to come

into a lab in the psychology building on five separate occasions. At the first session, participants filled out the informed consent, completed the EAT-26 questionnaire, completed the body image questionnaire, and wrote on a designated topic (body image, traumatic event, or rooms of their home) for 30 minutes. At the second and third sessions, participants again wrote on the designated topic for 30 minutes. At the fourth session, participants wrote on the designated topic for 30 minutes and then filled out the body image questionnaire for the second time. At the fifth session, participants filled out the body image questionnaire for a third time and were debriefed about the study and expected results.

Research Questions and Hypotheses

This study has added to the body of literature by including three different writing tasks (expressive— writing about body image, expressive— writing about a traumatic event, and factual—writing about a room) in two different groups of women (low symptomatology and high symptomatology). The primary research questions addressed (a) whether women who are asymptomatic differ from women who are symptomatic in how they respond on a body image questionnaire before writing, (b) whether type of writing affects how these two groups of women respond on a body image questionnaire immediately after writing, and (c) whether type of writing affects how these two groups of women respond on a body image questionnaire one month later. At each of these three times, the body image questionnaire asked the women to select the figure that they believe matches their current figure, the figure that they believe is the ideal figure, and the figure that they believe men would prefer.

Objectives and Outcomes

The objective of the current study was to examine whether women who have high eating disorder symptomatology respond differently on a body image questionnaire than women with low eating disorder symptomatology. Another objective of this study was to extend previous research to determine if an expressive writing task will help improve body image in either of these symptom groups, and if so, which writing task was the most beneficial.

Limitations

A limitation of this study was the small sample size that was used. Only 92 participants completed the study. A second limitation of this study is that a self-report questionnaire was used to separate asymptomatic and symptomatic women, and it is well known that one of the caveats of using a self-report measure is the social desirability effect. Due to this phenomenon, women could have been categorized into the wrong group if they did not answer the questions honestly. However, based on past research (Thompson & Thompson, 1986), this questionnaire method is the best way to separate women into these two groups. A third limitation is that BMI was only calculated at the beginning of the study, not at each time that the body image questionnaire was given to the participants. Since the study was relatively short (approximately a month and a half long), the primary researcher assumed that BMI would not change drastically for participants. Therefore, a change in the mean rating for current figure should represent a change in perception of body image rather than an actual change in body weight.

Delimitations

A delimitation of this study was that participants' writings were not read by the researcher to verify that they had stayed on topic. These writings were not read because each of the 92 participants had written on four separate occasions, so the current researcher would have had to read 368 entries. Also, the decision to use a convenience sample of undergraduate psychology majors from Texas State University—San Marcos limits the ability to generalize findings outside of this area. Individuals who are not students in this area may bear different characteristics and, therefore, are not represented by this sample. A third delimitation is that a score of 20 or higher on the EAT-26 usually means that the person is symptomatic. However, because of the small sample size, a median split, with a median of 7, of the EAT-26 scores was used to categorize women as having high or low eating disorder symptomatology.

Assumptions

It is assumed that all participants wrote on the designated topic that they were randomly assigned to for this study. It is also assumed that those women who had higher scores on the EAT-26 are at greater risk of developing an eating disorder than those women who scored lower on the EAT-26. Finally, because of the short duration of the study, it is assumed that a change in the mean rating for current figure should represent a change in perception of body image rather than an actual change in body weight.

Definition of Key Terms

Symptomatic refers to women who have or have previously had eating disorder symptoms (extreme dietary restriction, bingeing, vomiting, and/or laxative abuse) but are not and have never been clinically diagnosed with an eating disorder. Asymptomatic

refers to women who do not have eating disorder symptoms and have never had eating disorder symptoms. High symptomatology refers to women who had scores of 7 or greater on the EAT-26, and high symptomatology is used interchangeably with symptomatic for the purposes of this study. Low symptomatology refers to women who had scores of lower than 7 on the EAT-26, and low symptomatology is used interchangeably with asymptomatic for the purposes of this study. Expressive writing refers to any writings where the individual writes about thoughts and emotions about a particular event (body image and traumatic event writing tasks in this study). Factual writing refers to any writings where the individual writes about facts only and does not include any thoughts or emotions about these facts (room-control in this study).

Organization of the Thesis

This thesis is divided into five chapters. The first chapter is the introduction and describes the background of the study, the problem statement, the purpose and significance of the study, an overview of the methodology, the research questions and hypotheses, objectives and outcomes, limitations, delimitations, assumptions, and definitions of key terms. The second chapter is the review of the literature that lays the foundation for the current study. The third chapter describes in detail the methods that will be used to gather the data for this study. Samples, instruments, and techniques are described in this chapter. The fourth chapter reports the anticipated results of the study. The fifth chapter includes a discussion of the results and their implications.

CHAPTER II

LITERATURE REVIEW

Misperception or distortion of body image is so often associated with eating disorders that the American Psychiatric Association (2000) includes “a disturbance in perception of body shape and weight” (p. 583) as an essential feature of anorexia and bulimia. Body image distortion includes perceptual distortion of one’s body and negative feelings towards one’s body, which are separate but related factors (Gray, 1977). Women often see themselves as larger, and this misperception leads to negative feelings about their body image. Past research has shown that women overestimate their body size and often view their current figure as larger than what they view as the ideal female figure (Fallon & Rozin, 1985; Lokken et al., 2003; Rand & Wright, 2000; Rozin & Fallon, 1988). Past research also indicates that expressive writing has helped individuals with a variety of psychological and physical problems (Eells, 2006; Graf et al., 2008; Kallay & Baban, 2008; Klein & Boals, 2001; Kuiken et al., 2008; Low et al., 2010; Pachankis & Goldfried, 2010; Pennebaker et al., 1990; Pennebaker et al., 1987; Pennebaker et al., 1988; Slatcher & Pennebaker, 2006; Sloan et al., 2009; Sloan et al., 2008; Smyth et al., 2008; Spera et al., 1994; Yogo & Fujihara, 2008); however, there have been few studies investigating the use of expressive writing tasks for improvement in body image. The research that has been conducted in this area (e.g., Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008; Schmidt et al., 2002) has not shown similar results

to previous studies (that expressive writing groups improve more than factual writing groups), but no two researchers have used similar participants or writing tasks.

Figure Ratings and Body Image

Using silhouette figures that were developed by Stunkard et al. (1983) to determine perceptions of body image, many researchers have examined the discrepancy between what women see as their current figure and what they see as the ideal female figure. Three predominant results have been found in this research. First, women, regardless of weight, believe that thin female figures are more attractive than normal or overweight female figures (Fallon & Rozin, 1985; Lokken et al., 2003; Rand & Wright, 2000; Rozin & Fallon, 1988). Second, women, regardless of weight, believe that their current figure is bigger than the ideal, judging themselves to be overweight when comparing their current figure to their ideal figure (Fallon & Rozin, 1985; Lokken et al., 2003; Rozin & Fallon, 1988). Third, women believe that men prefer a thinner figure than men actually do (Bergstrom et al., 2004; Fallon & Rozin, 1985; Rozin & Fallon, 1988). These distorted beliefs (that thinner figures are more ideal, that their figure is larger than the ideal, and that men prefer thinner figures) likely lead to dissatisfaction in women, which then leads to dieting. Bergstrom et al. (2004) add to these findings by stating that dieters actually do have more distorted body perceptions than non-dieters and that women with eating disorders have more distorted body perceptions than the general population. Thus, these distorted beliefs can eventually lead to development of an eating disorder.

Expressive Writing

Over 20 years ago, the first expressive writing study was conducted by Pennebaker and Beall (1986), and participants who wrote about their emotions for 15

minutes on four consecutive days had improved health over the next few months when compared to a control group who wrote about superficial topics (as cited in Smyth & Pennebaker, 2008). Since then, over 200 expressive writing studies have been conducted, with no two studies using the same expressive writing “recipe” (Smyth & Pennebaker, 2008). It has been found that sometimes this paradigm works and other times, it does not; however, since no two studies have been exactly alike, it is difficult to say why it works sometimes and does not work at other times (Smyth & Pennebaker, 2008).

Research reveals that writing about traumatic experiences has positive effects on physical and psychological health, such as decreased levels of distress in those who have suffered a trauma or loss (Kuiken et al., 2008); increased optimism about finding a new job in those who had recently lost a job (Spera et al., 1994); decreased depression, anxiety, and stress (Graf et al., 2008; Sloan et al., 2009; Sloan et al., 2008; Smyth et al., 2008); improved psychosocial functioning in homosexual men (Pachankis & Goldfried, 2010); improved working memory capacity (Klein & Boals, 2001; Yogo & Fujihara, 2008); improved romantic relationships (Eels, 2006; Slatcher & Pennebaker, 2006); fewer doctor visits (Pennebaker et al., 1990; Pennebaker et al., 1988); and lowered blood pressure (Pennebaker et al., 1987). Expressive writing has also been beneficial for cancer patients, such that female cancer patients with low levels of emotional support report fewer intrusive thoughts (Low et al., 2010), and female cancer patients report decreased distress and depression levels and higher levels of positive meaning in life (Kallay & Baban, 2008).

Only a handful of researchers have used expressive writing interventions in an attempt to improve body image. Some researchers conducted research on individuals

with eating disorders (Hiltunen, 2008; Schmidt et al., 2002), whereas others conducted research on university students (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007). Although most researchers used both a control group and an experimental group, their writing tasks differed. Frayne and Wade (2006) had the experimental group write about past trauma and the control group write about future planning; Earnhardt et al. (2002) had the experimental group write about body image and the control group write about their room; Grasso (2007) had the experimental group write about their weight, shape, appearance, and other physical characteristics and the control group write about stress related to college; and Hiltunen (2008) had the experimental group write about an upsetting experience and the control group write about their favorite distraction. Only one group of researchers did not use a control and experimental group; instead, they had individuals with bulimia and binge-eating disorder write about stressful events but had individuals with anorexia reflect on their attachment relationships (Schmidt et al., 2002).

While past research has shown expressive writing to be much more therapeutic than factual writing for individuals with a variety of physical and psychological problems (Eells, 2006; Graf et al., 2008; Kallay & Baban, 2008; Klein & Boals, 2001; Kuiken et al., 2008; Low et al., 2010; Pachankis & Goldfried, 2010; Pennebake et al., 1990; Pennebaker et al., 1987; Pennebaker et al., 1988; Slatcher & Pennebaker, 2006; Sloan et al., 2009; Sloan et al., 2008; Smyth et al., 2008; Sper et al., 1994; Yogo & Fujihara, 2008), the current literature does not suggest that the same is true for body image and eating disorder symptoms. In particular, most researchers found that both of their writing groups experienced an equivalent increase in mood (Earnhardt et al., 2002; Hiltunen, 2008), improvement in body image (Earnhardt et al., 2002; Grasso, 2007), and decrease

in disordered eating (Earnhardt et al., 2002; Grasso, 2007; Hiltunen, 2008). However, Frayne and Wade (2006) found that the control group who wrote about future planning experienced greater reduction in disordered eating and ineffectiveness (feelings of inadequacy, insecurity, worthlessness, and lack of control) at the 10-week follow up than the experimental group who wrote about a traumatic event. Frayne and Wade (2006) attributed these reductions to the idea that the individuals who wrote about future planning probably felt more control over valued outcomes and that future planning may aid in the development of future coping tasks. These results are opposite of what would be expected based on past expressive writing research, but still suggest that any type of writing may help. Yet, Grasso (2007) found that the group who wrote about body image self-reported that their expressive writing impacted their body image in a more positive way than the group who wrote about college stress.

Research regarding writing interventions for body image and eating disorder symptomatology has not shown the same results as previous research regarding expressive writing interventions for people with psychological and physical problems. In most of this research (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008), groups, regardless of whether they engaged in expressive or factual writing, seemed to improve. However, this research has been limited and many different methods have been used. No two researchers used the same writing tasks, and some researchers used university students, while other researchers used individuals with eating disorders.

CHAPTER III

METHODS

This chapter, which describes the research methodology and procedures that were used in the study, consists of the following sections: research perspective, research design, research questions and hypotheses, participants, research variables, research instrument, pilot study, data collection procedures, data and statistical analyses, setting and environment, bias and error, reliability and validity, and a summary.

Research Perspective

This research study was guided by an interest in understanding the way that women perceive themselves before and after an expressive writing task. This study was also aimed at comparing symptomatic women to asymptomatic women to try to understand what types of women have lower body images and may be more at risk for developing an eating disorder.

Research Design

The design of this study was a 2 x 3 x 3 mixed-design experiment. The two between-subjects factors were symptom group (high symptomatology or low symptomatology) and type of writing (body image writing, traumatic event writing, or room writing). The within-subjects factor was time, whereby each participant completed a body image questionnaire on three separate occasions (pre-intervention, post-intervention, and one month follow up). This study had three ordinal dependent variables

from the body image questionnaire: rating of the ideal figure, rating of the woman's current figure, and rating of the figure that women think men most prefer.

Research Questions and Hypotheses

This study had added to this body of literature by including three different writing tasks (expressive— writing about body image, expressive— writing about a traumatic event, and factual—writing about a room) in two different groups of women (high symptomatology and low symptomatology). The primary research questions addressed (a) whether women who are asymptomatic differ from women who are symptomatic in how they respond on a body image questionnaire before writing, (b) whether type of writing affects how these two groups of women respond on a body image questionnaire immediately after writing, and (c) whether type of writing affects how these two groups of women respond on a body image questionnaire one month later. At each of these three times, the body image questionnaire asked the women to select the figure that they believe matches their current figure, the figure that they believe is the ideal figure, and the figure that they believe men would prefer.

Participants

Participants included 92 female undergraduate students studying psychology at Texas State University—San Marcos. With consent of the instructors, participants received extra credit for their participation. In addition, participants who completed all phases of the experiment had their name put into a drawing with a chance of winning \$500. Given how many participants were needed for this study and given the time commitment that it required (five research sessions in the lab), these incentives were deemed necessary to encourage participation. Participants had a mean age (\pm SD) of

19.15 ± 1.74 years and a self-reported body mass index (BMI) of 23.39 ± 4.78. Most participants (56.5%) were Caucasian, 33.7% were Hispanic, 6.5% were African American, 2.2% were Asian American, and 1.1% were American Indian. Based on a median split of the EAT-26 scores, with a median of 7, participants were separated into symptom groups. Approximately 54% of participants were grouped into the low symptomatology group, and 46% of the participants were grouped into the high symptomatology group. Using a random number generator, participants were separated into writing group—40.2% wrote about their body image, 30.4% wrote about a traumatic event, and 29.3% were in the control group and wrote about the rooms of their home.

Research Variables

This study had two between-subjects factors: symptom group (low symptomatology or high symptomatology) and type of writing (body image writing, traumatic event writing, or room writing). This study also had a within-subjects factor: time, whereby each participant completed a body image questionnaire on three separate occasions (pretest, posttest, and one month follow up). This study had three ordinal dependent variables from the body image questionnaire: rating of the ideal figure, rating of the woman's current figure, and rating of the figure that women think men most prefer. For the rating of the ideal figure, women selected one of nine figures (that gradually change from very thin to very obese), which they believe represented the ideal figure. Individual scores ranged from 1 to 9, with lower scores representing thinner figures deemed as the ideal. For the rating of the current figure, women selected the figure which they believe is closest to their current figure. For the rating of the figure that

women think men most prefer, women selected the figure which they believe men would find most attractive.

Research Instrument and Procedures

Participants were asked to come to a lab in the psychology building at Texas State University-San Marcos to participate in the study. Upon hearing a brief description of the study and signing a consent form, participants completed the EAT-26 (Garner & Garfinkel, 1979; see Appendix A), a questionnaire that asks about extreme dietary restrictions and dieting behavior, bingeing, vomiting, laxative abuse, and other symptoms of eating disorders. The EAT-26 has been shown to be internally consistent with a Cronbach's alpha of .85 (Siervo, Boschi, Papa, Bellini, & Falconi, 2005), and it has been validated with anorexic patients and with nonclinical individuals at risk of developing eating disorders (Button & Whitehouse, 1981; Johnson-Sabine, Wood, Mann, & Wakeling, 1985; Thompson & Schwartz, 1982; Williams, Schaefer, Shisslak, Gronwaldt, & Comerchi, 1986).

After completing the EAT-26, participants completed the body image questionnaire (Pulvers et al., 2004; see Appendix B). For the rating of the ideal figure, participants selected one of nine figures (that gradually change from very thin to very obese), which they believe represents the ideal figure. Individual scores ranged from 1 to 9, with lower numbers representing thinner figures deemed as the ideal. For the rating of the current figure, participants selected one of these same nine figures, which they believed is closest to their current figure. For the rating of the figure that women think men most prefer, participants selected one of these same nine figures, which they believed men would find most attractive. Pulvers et al.'s (2004) silhouette figures are

more humanlike and are more representative of all races than previously used figures (e.g. Stunkard's), and these researchers validated the instrument with findings of positive correlations between participants' ratings of their own figures and both their BMI and observers' ratings of the participants' figures.

Participants from each group were randomly assigned to one of three writing conditions (body image writing, traumatic event writing, or room writing). Immediately after completing the body image questionnaire, participants spent 30 minutes writing about their designated topic. Over the next two weeks, participants were asked to return to the lab on three non-consecutive days to continue the writing task. On each of these days, participants again spent 30 minutes writing about their designated topic. After the last writing session, participants completed the body image questionnaire. Finally, participants were asked to return to the lab one month later to complete the body image questionnaire one final time, after which participants were completely debriefed about the study and expected results.

Data and Statistical Analysis

Three mixed-design $3 \times 2 \times 2$ analyses of covariance (one for each dependent variable: ideal figure, current figure, and figure that men find most attractive) were conducted to determine the main effects and the interactions. For all analyses, the between-subjects factors were writing condition (body image, traumatic event, and room control) and symptom group (low symptomatology and high symptomatology), and BMI was included as a covariate.

Setting and Environment

Participants were asked to come to a lab in the psychology building at Texas State University—San Marcos to participate in the study. The lab consisted of one large room with six smaller connected rooms (three on each side of the larger room). Participants completed the survey in the large room and two of the smaller connected rooms. Participants completed the survey on their own but in the presence of other participants completing the same survey. Another researcher and her participants were using two of the smaller rooms, but since participants in this study were randomly assigned, this factor should not add confounding variables.

Bias and Error

There was potential for error in this study due to the self-report nature of the survey. Some participants may not have answered truthfully to some of the questions on the EAT-26 (Garner & Garfinkel, 1979), which could have resulted in these participants being placed in the wrong group. However, because the survey is anonymous, this error should be minimal.

Reliability and Validity

The EAT-26 (Garner & Garfinkel, 1979) is designed to measure eating attitudes and will indicate whether an individual is at risk for developing an eating disorder. The reliability and validity of this questionnaire has been reported elsewhere (Siervo et al., 2005). Siervo et al.'s (2005) reliability analysis showed that the EAT-26 had a Cronbach's alpha of 0.85, suggesting that it has internal consistency when measuring eating attitudes. A number of researchers have also validated the EAT-26 with anorexic patients and have used the survey to distinguish nonclinical individuals who are at risk of

developing eating disorders (Button & Whitehouse, 1981; Johnson-Sabine, Wood, Mann, & Wakeling, 1985; Thompson & Schwartz, 1982; Williams, Schaefer, Shisslak, Gronwaldt, & Comerci, 1986).

Pulvers et al.'s (2004) silhouette figures are nine figures which range from very thin to very obese. These figures are more humanlike and are more representative of all races than previously used figures. The reliability and validity of these figures is reported elsewhere (Pulvers et al., 2004). These researchers found that interrater reliability was high ($r = 0.85$) and that there was high internal consistency among raters, with a Cronbach's alpha of 0.95. Pulvers et al. (2004) tested content validity first by having practitioners arrange the figures in order from thinnest to heaviest and then by having the practitioners classify the figures by weight. All practitioners arranged the female figures in the correct order, and the practitioners' classifications were fairly high ($r = 0.91$). The practitioners' ratings were also very consistent, with a Cronbach's alpha of 0.99. To test convergent validity, Pulvers et al. (2004) first compared the participants' ratings of their bodies to the observers' ratings of the participants' bodies. Then they compared the degree to which the observers' ratings of the participants' body sizes matched the participants' perception of their weight status. Pulvers et al. (2004) reported Spearman's correlations of 0.83 and 0.69, respectively. These researchers also tested concurrent validity by comparing observers' ratings of participants' bodies to the participants' BMI and percent of body fat and also by comparing the participants' ratings of their own bodies to their BMI and percent of body fat. They report that Spearman's correlations for BMI ranged from 0.88 to 0.93 for observers and 0.82 for women. Pulvers et al. (2004) also report that Spearman's correlations for body fat percentage ranged from 0.81 to 0.88

for observers and 0.78 for women. Based on previous research, all of the instruments used in this study have demonstrated good reliability and validity.

Summary

This chapter focused on the methodology, procedures, and materials that were used in the current study. The current study is a 2 x 3 x 3 mixed design. Ninety-two women participated in this study and were separated into symptom groups based on a median split of their EAT-26 scores. A median split was used to ensure a sufficient subsample size for each group, and the division of groups is further discussed in the discussion chapter. All participants were given Pulvers et al.'s (2004) nine silhouette figures and asked to indicate the figure they think they are currently, the figure they think is the ideal female figure, and the figure they think men would find most attractive. The participants completed these ratings three times: before the expressive writing task, immediately after the expressive writing task, and one month after the expressive writing task. These data were analyzed using three ANCOVAs.

CHAPTER IV

RESULTS

This chapter is presented in four sections. The first is a methodology summary, which will summarize the methodology used to complete this study. The second section describes the participants that were used in the study. The third section will present the results. Finally, the fourth section is the summary of results, which will convey all significant findings and introduce the forthcoming chapter.

Methodology Summary

This study was conducted at Texas State University—San Marcos, using a convenience sample of undergraduate psychology majors. The study was a 2 x 3 x 3 mixed design experiment. The two between-subject factors were symptom level (high symptomatology or low symptomatology) and writing condition (body image, traumatic event, or room control), and the within-subjects factor was time, whereby each participant took a body image questionnaire on three separate occasions (pre-intervention, post-intervention, and one month later). Participants were asked to come into a lab in the psychology building on five separate occasions. At the first session, participants filled out the informed consent, completed the EAT-26 questionnaire, completed the body image questionnaire, and wrote on a designated topic (body image, traumatic event, or rooms of their home) for 30 minutes. At the second and third sessions, participants again wrote on the designated topic for 30 minutes. At the fourth session,

participants wrote on the designated topic for 30 minutes and then filled out the body image questionnaire for the second time. At the fifth session, participants filled out the body image questionnaire for a third time and were debriefed about the study and expected results.

The research questions for this study were (a) whether the type of writing intervention will, *immediately after the intervention*, affect the body image of women varying in level of eating-disordered symptoms and (b) whether the type of writing intervention will, *one month after the intervention*, affect the body image of women varying in level of eating-disordered symptoms.

Participants

Participants in this study were 92 female undergraduate psychology majors at Texas State University—San Marcos. The researcher received permission from psychology professors to make an announcement at the beginning of their class about the upcoming study. Then four binders with the study information (dates, time, location, and overview of procedures) were passed around, and participants were instructed to take a slip that contained the dates and time that they would be available to participate in the study. The participants in this study had a mean age (\pm SD) of 19.15 years \pm 1.74 years, and a mean BMI of 23.39 \pm 4.78. Participants had a mean EAT-26 score of 9.78 \pm 8.17. The majority of participants (56.5%) were Caucasian, 33.7% were Hispanic, 6.5% were African American, 2.2% were Asian American, and 1.1% were American Indian. Participants were separated into symptom group based on a median split, with a median of 7, of their EAT-26 scores. A little over half (54.3%) of participants were placed in the low symptomatology group, and 45.7% were placed in the high symptomatology group.

Participants were randomly assigned to writing condition with 40.2% writing about body image, 30.4% writing about a traumatic event, and 29.3% writing about the rooms of their home.

Out of the 92 participants, 11 did not complete the study. Five of them were in the body-image condition, one was in the traumatic-event condition, and five were in the room-control condition; this difference was not statistically significant, $\chi^2 = 2.91, p = .23$. In addition, the completers and non-completers did not significantly differ on BMI, EAT-26 score, or initial figure ratings (see Table 1).

Results

Three mixed-design 2 x 3 x 3 ANCOVAs (one for each dependent variable: ideal figure, current figure, and figure that men find most attractive) were conducted to determine the main effects and the interactions. For all analyses, the between-subjects factors were writing condition (body image, traumatic event, and room control) and symptom group (low symptomatology and high symptomatology), and body-mass index (BMI) was included as a covariate.

Table 1

Differences Between Completers and Non-Completers

	<i>M (SD)</i>		<i>t</i>	<i>p</i>
	Completers (<i>n</i> = 81)	Non-completers (<i>n</i> = 11)		
BMI	23.47 (4.87)	22.83 (4.21)	0.41	.68
Eat-26 score	9.75 (8.33)	10.09 (7.16)	0.13	.90
Rating of ideal figure	3.34 (0.70)	3.09 (0.70)	1.11	.27
Rating of current figure	4.17 (1.22)	4.00 (1.00)	0.43	.67
Rating of figure preferred by men	3.18 (0.63)	3.27 (0.65)	0.46	.65

Note. Ratings in this table are those that were completed before the writing intervention.

Regarding participants' ratings of the figure that they deemed to be the ideal figure, the descriptive statistics are provided in Table 2, and the results of the ANCOVA analysis are presented in Table 3. As may be seen from the latter table, none of the main effects and none of the interactions were significant.

Table 2

Mean Ratings of the Figure Deemed as the Ideal Figure

Writing intervention	Low symptom level		High symptom level	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
	Before intervention			
Body image	18	3.28 (0.83)	13	3.23 (0.73)
Traumatic event	15	3.47 (0.64)	12	3.22 (0.67)
Room control	12	3.58 (0.51)	10	3.55 (0.60)
	Immediately after intervention			
Body image	18	3.36 (0.68)	13	3.31 (0.63)
Traumatic event	15	3.37 (0.48)	12	2.83 (0.58)
Room control	12	3.25 (0.45)	10	3.40 (0.52)
	One month after intervention			
Body image	18	3.50 (0.71)	13	3.31 (0.75)
Traumatic event	15	3.50 (0.73)	12	2.75 (0.62)
Room control	12	3.42 (0.51)	10	3.45 (0.50)

Table 3

ANCOVA Results for Ratings of the Figure Deemed as the Ideal Figure

	<i>Df</i>	<i>F</i>	<i>p</i>	η_p^2
Covariate: Body mass index	1	3.81	.055	.050
Time (T)	2	.08	.925	.001
Writing condition (WC)	2	2.18	.120	.056
Eating disorder symptom level (EDSL)	1	3.22	.077	.042
T x WC	4	1.52	.201	.040
T x EDSL	2	.98	.379	.013
WC x EDSL	2	1.65	.199	.043
T x WC x EDSL	4	.28	.888	.008
Within-group error for time	146	(0.13)		
Within-group error for between variables	73	(0.32)		

Note. Values in parentheses are mean square errors.

Regarding participants' ratings of the figure that they deemed to be closest to their current figure, the descriptive statistics are provided in Table 4, and the ANCOVA results are presented in Table 5. There was a near-significant ($p = .054$) interaction between time and the participants' symptom level. Figure 1 shows that the rating for current figure decreased from Time 1 (before intervention) to Time 2 (immediately after intervention) and from Time 1 to Time 3 (one month later) for the high symptom group only.

Table 4

Mean Ratings of the Figure Deemed Closest to the Participant's Figure

Writing intervention	Low symptom level		High symptom level	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
	Before intervention			
Body image	18	3.78 (0.65)	13	4.08 (0.86)
Traumatic event	15	4.40 (1.92)	12	4.13 (1.25)
Room control	12	4.08 (1.24)	10	4.70 (1.06)
	Immediately after intervention			
Body image	18	3.75 (0.62)	13	3.81 (0.80)
Traumatic event	15	4.47 (1.85)	12	3.83 (1.17)
Room control	12	3.83 (1.19)	10	4.30 (0.82)
	One month after intervention			
Body image	18	3.67 (0.57)	13	3.85 (0.80)
Traumatic event	15	4.53 (1.85)	12	3.96 (1.36)
Room control	12	3.92 (1.08)	10	4.10 (0.74)

Table 5

ANCOVA Results for Ratings of the Figure Deemed Closest to the Participant's Figure

	<i>Df</i>	<i>F</i>	<i>p</i>	η_p^2
Covariate: Body mass index	1	144.71	.000	.665
Time (T)	2	.93	.398	.013
Writing condition (WC)	2	.09	.907	.003
Eating disorder symptom level (EDSL)	1	.07	.796	.001
T x WC	4	1.44	.225	.038
T x EDSL	2	2.97	.054	.039
WC x EDSL	2	.31	.731	.008
T x WC x EDSL	4	.72	.580	.019
Within-group error for time	146	(.15)		
Within-group error for between variables	73	(.44)		

Note. Values in parentheses are mean square errors.

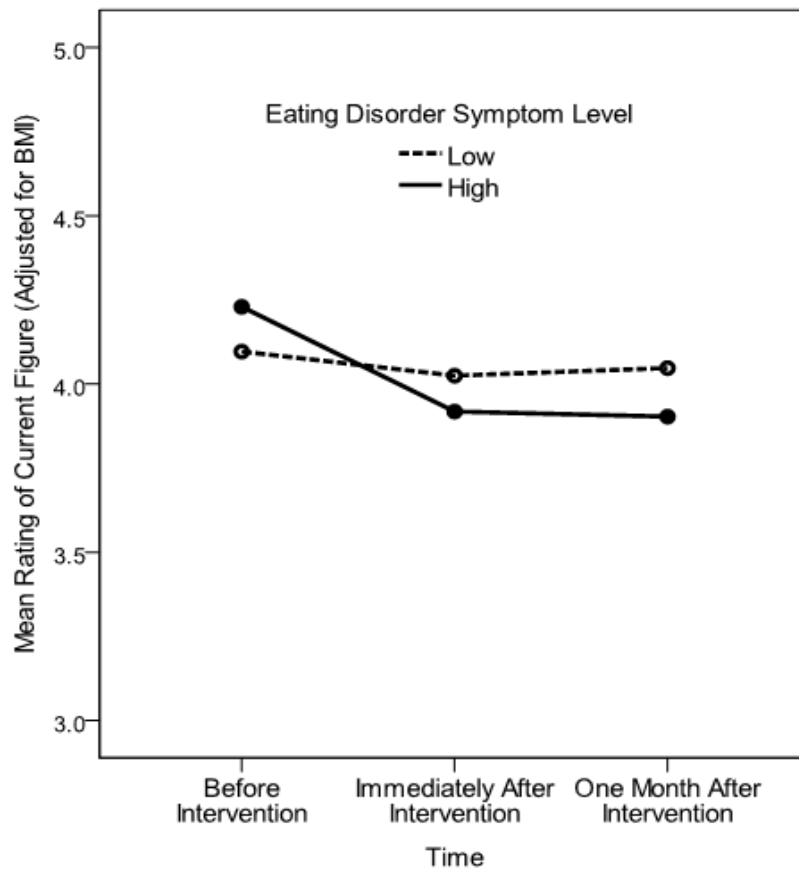


Figure 1. Mean ratings of the figure deemed by the participants as closest to their own figure. Note that these means are adjusted, after removing covariance from BMI.

Regarding participants' ratings of the figure deemed as the figure that most men prefer, the descriptive statistics are provided in Table 6, and the results of the ANCOVA analysis are presented in Table 7. As may be seen from the latter table, these ratings were significantly lower for the high symptomatology group than for the low symptomatology group. Thus, those women with greater symptoms of eating disorders were more likely to believe that men preferred a thinner figure. However, as with the ratings of the figure they deemed to be ideal, none of the other main effects and none of the interactions were significant.

Table 6

Mean Ratings of the Figure Deemed as the Figure that Men Prefer

Writing intervention	Low symptom level		High symptom level	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
	Before intervention			
Body image	18	3.28 (0.67)	13	2.92 (0.76)
Traumatic event	15	3.30 (0.70)	12	3.17 (0.58)
Room control	12	3.25 (0.45)	10	3.10 (0.57)
	Immediately after intervention			
Body image	18	3.25 (0.65)	13	2.92 (0.76)
Traumatic event	15	3.23 (0.56)	12	2.92 (0.47)
Room control	12	3.17 (0.39)	10	3.00 (0.67)
	One month after intervention			
Body image	18	3.31 (0.62)	13	2.92 (0.64)
Traumatic event	15	3.27 (0.62)	12	3.00 (0.43)
Room control	12	3.25 (0.45)	10	3.05 (0.50)

Table 7

ANCOVA Results for Ratings of the Figure Deemed as the Figure that Men Prefer

	<i>Df</i>	<i>F</i>	<i>p</i>	η_p^2
Covariate: Body mass index	1	.03	.856	.000
Time (T)	2	.06	.946	.001
Writing condition (WC)	2	.06	.936	.002
Eating disorder symptom level (EDSL)	1	4.01	.049	.052
T x WC	4	.48	.752	.013
T x EDSL	2	.32	.724	.004
WC x EDSL	2	.18	.840	.005
T x WC x EDSL	4	.25	.908	.007
Within-group error for time	146	(.08)		
Within-group error for between variables	73	(.31)		

Note. Values in parentheses are mean square errors.

Summary

This chapter provided the results of the current study. The two research questions were (a) whether the type of writing intervention will, *immediately after the intervention*, affect the body image of women varying in level of eating-disordered symptoms and

(b) whether the type of writing intervention will, *one month after the intervention*, affect the body image of women varying in level of eating-disordered symptoms. Based on these research questions, only one significant interaction was found. For participants in the high symptomatology group, their mean current figure decreased from Time 1 to Time 2 and from Time 1 to Time 3. However, the other two ANCOVAs (ideal figure and figure deemed as the figure that men prefer) revealed no significant effects. The final chapter will address the reasoning why only one of the ANCOVAs was approaching significance, as well as implications for future research, implications for practice, and the limitations of the current study.

CHAPTER V

INTERPRETATION AND RECOMMENDATIONS

In this final chapter, conclusions, study limitations, and implications for future research will be discussed. This research was designed to compare body image perceptions between women who are symptomatic (have symptoms of an eating disorder) but not clinically diagnosed and women who are asymptomatic (do not have symptoms of an eating disorder). By examining the mean ratings of ideal figure, current figure, and figure deemed as the one that men prefer, the current author wanted to determine if a writing intervention could affect body image in women with varying levels of eating disorder symptomatology.

Summary of Results

Support emerged for the two research questions only for the rating of the current figure. The mean rating for the current figure decreased from before the writing task to immediately after the writing task and from before the writing task to one month later for the group with high eating disorder symptomatology. However, for the group with low eating disorder symptoms, the current figure decreased from before the writing task to immediately after the writing task but showed no change from before the intervention to one month later. No support emerged for the research questions for the ratings of the ideal figure or the figure that was deemed as the one that men would prefer.

Discussion of Results

In this study, there were no significant changes in the mean ratings of the ideal figure and the figure deemed as the one that men would prefer. The reason that these figure ratings were not affected by the writing intervention could be that possibly the idea of what is considered ideal and beautiful by both men and women is so ingrained in us that it is difficult to change. The media constantly bombards consumers with images of the “ideal woman” and promises that by using a certain product any “normal” woman can meet that standard. Straub (2007) states that the latest ideal is constantly reinforced by media images, and the media’s influence of establishing role models is undeniable. So, the fact that the mean rating of the ideal figure and the mean rating of the figure deemed as the one that men would most prefer did not significantly change is not surprising. These ideas of ideal are so deep-rooted in today’s women that it may take a lot more than just an expressive writing task to change them.

The fact that the mean rating of the current figure decreased from pre-intervention to post-intervention to one month later, regardless of writing group is not surprising, considering past research on expressive writing and body image (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008). Past researchers (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008) have also found that regardless of writing group, body image improves. Also, the fact that the ANCOVA for the current figure was the only one approaching significance makes sense. The mean figure rating for the current figure for high symptomatology participants in all writing groups was 4.27 before the writing intervention, 3.96 immediately after the writing intervention, and 3.96 one month later. These findings show that the writing intervention

had long lasting effects. Also, the mean figure rating for the ideal figure for high symptomatology participants in all writing groups was 3.21 before the intervention, 3.17 immediately after the intervention, and 3.16 one month later. So, the mean ratings for the current figure for those in the high symptomatology group were actually getting closer to the mean ratings for the ideal figure for those same participants. In other words, their perception of their current figure was more similar to what they believed is ideal after the writing task. This finding makes the current author believe that current figure rating was the only one that should have changed after the writing intervention, and it should have gotten closer to the mean ratings for the ideal figure. Since the mean rating for the current figure did in fact get closer to the mean rating for the ideal figure for the high symptomatology group, then it would appear that the body image of these women were improved by all writing, regardless if it is expressive writing or factual writing.

It is difficult to say exactly *why* something as simple as a writing task could produce such long lasting effects. However, one explanation may be that a variety of factors could be involved. Smyth and Pennebaker (2008) state that writing may force these individuals to label and acknowledge their emotional experiences. They hypothesize that labeling and acknowledging their experiences may lead to “more complex cognitive representation of the event and surrounding emotions, which, in-turn, may affect working memory” (Smyth & Pennebaker, 2008, p. 3). They also state that emotional changes are occurring as well (Smyth & Pennebaker, 2008). Labeling and acknowledging emotional experiences may change the way the person views herself, especially if she already has a distorted body image. Another explanation may be that writing about different experiences, rather than keeping them “bottled up” inside also

makes the person feel better emotionally. While it is unclear *why* the writing intervention works, the interaction of a variety of factors could be the explanation.

The reason that the individuals with low symptoms only changed from pre-intervention to post-intervention but not from pre-intervention to one month later could possibly be because these women did not have a distorted body image. These women had very low symptoms of an eating disorder, and therefore, should not have needed an improvement in their body image.

Summary Statement

This study showed similar results to past research on expressive writing and body image (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008), at least in the high symptomatology group. These women had an improvement in body image, regardless of writing group. Their mean rating of the figure that they believe they look like currently decreased and moved closer to the mean rating of the figure that they believe is ideal. This finding shows that writing may be beneficial for women who have higher eating disorder symptoms or a distorted body image.

Implications for Future Research

Since the ANCOVA for the current figure was approaching significance and it was shown that writing somewhat improves body image in those with high eating disorder symptoms, future researchers should test this finding in a larger sample. Second, future research should test to see whether participant race/ethnicity has any effect on if the writing task is effective. Unfortunately, because of the small sample size, the current researcher could not test for differences based on race/ethnicity. Future research should also include women with eating disorders. If women with high eating disorder

symptomatology had an improvement in body image after writing, then perhaps women with eating disorders would also benefit from this type of intervention as well.

Implications for Practice

The American Psychiatric Association (2000) includes “a disturbance in perception of body shape and weight” (p. 583) as an essential feature of both anorexia and bulimia. Since this study showed that women with higher levels of eating disorder symptomatology had an improvement in body image after a writing task, then perhaps this paradigm can be used with women with eating disorders. Perhaps writing would help women with eating disorders also have an improvement in their body image, and this intervention can be used as part of the comprehensive treatment that is already used for women with eating disorders. Also, since this study showed that this writing intervention was beneficial and improved body image perceptions for those women with high eating disorders symptomatology, then perhaps this type of intervention could be used as a preventative measure for women who are symptomatic but do not have serious enough symptoms to be diagnosed with an eating disorder. Perhaps this writing intervention, as a part of a more comprehensive therapy, could help prevent more teenagers and women from developing serious and life-threatening eating disorders.

Limitations

A limitation of this study was the small sample size that was used. Only 92 participants completed the study. Future research should attempt to get a larger sample, especially more participants from a variety of cultural backgrounds. A second limitation of this study was that a self-report questionnaire was used to separate asymptomatic and symptomatic women, and it is impossible to determine if these women answered

dishonestly on the questionnaire and were categorized into the wrong group. However, based on past research (Thompson & Thompson, 1986), this questionnaire method is the best way to separate women into these two groups. A third limitation was that BMI was only calculated at the beginning of the study, not at each time that the body image questionnaire was given to the participants. Since the study was relatively short (approximately a month and a half long), the primary researcher assumed that BMI would not change drastically for participants. Therefore, a change in the mean rating for current figure should represent a change in perception of body image rather than an actual change in body weight. A fourth limitation was that the true cutoff score (20) on the EAT-26 could not be used because of the small number of participants who met that cutoff. Instead, a median split, with a median of 7, had to be used to separate women into the high and low symptom groups. Because of the low number of participants in this study, this median split was the best option; however, future researchers should try to get more participants so that the true cutoff score of 20 could be used to separate participants into symptom groups. Finally, a fifth limitation was that all of the participants in this study were female college students between the ages of 18 and 45 in central Texas. These results may not be able to be generalized to anyone not meeting these characteristics.

Summary and Conclusion

Misperception or distortion of body image is so often associated with eating disorders that the American Psychiatric Association (2000) includes “a disturbance in perception of body shape and weight” (p. 583) as an essential feature of both anorexia and bulimia. Previous studies reveal that women overestimate their body size and often view their current figure as larger than what they view as the ideal female figure (Fallon

& Rozin, 1985; Lokken et al., 2003; Rand & Wright, 2000; Rozin & Fallon, 1988).

Although past research also indicates that expressive writing has helped individuals with a variety of psychological and physical problems (Eells, 2006; Graf et al., 2008; Kallay & Baban, 2008; Klein & Boals, 2001; Kuiken et al., 2008; Low et al., 2010; Pachankis & Goldfried, 2010; Pennebaker et al., 1990; Pennebaker et al., 1987; Pennebaker et al., 1988; Slatcher & Pennebaker, 2006; Sloan et al., 2009; Sloan et al., 2008; Smyth et al., 2008; Spera et al., 1994; Yogo & Fujihara, 2008), there have been few studies investigating the use of expressive writing tasks for improvement in body image. The research that has been conducted on this topic (e.g., Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008; Schmidt et al., 2002) has not shown similar results to previous studies (that expressive writing groups improve more than factual writing groups).

This study showed similar results to past research on expressive writing and body image (Earnhardt et al., 2002; Frayne & Wade, 2006; Grasso, 2007; Hiltunen, 2008), at least in the high symptomatology group. These women had an improvement in body image, regardless of writing group. Their mean rating of the figure that they believe they look like currently decreased and moved closer to the mean rating of the figure that they believe is ideal. This finding shows that writing (whether it be factual or expressive) may be beneficial for women who have eating disorder symptoms or a distorted body image. The women in the low symptomatology group did not show the same pattern, which makes sense because these women should not have a distorted body image. Also, the mean ratings for the figure deemed as the ideal and the figure deemed as the one that men would most prefer were not significantly changed by the writing intervention. This

finding makes sense because women today are basically brainwashed by the media and told what the ideal woman should look like and what body shape men “should” prefer. So, although this study failed to show a change in the mean ratings for the ideal figure or the figure deemed as the one that men would most prefer, the fact that the mean rating for the current figure decreased and got closer to the mean rating of the ideal figure for women with high eating disorder symptomatology shows that writing (both factual and expressive) may be beneficial and help improve body image in women who have a distorted body image or show early signs of an eating disorder.

APPENDIX A

EAT-26 Questionnaire

For each statement below, circle the response that indicates how often you feel the way that is indicated in the statement.

1. Am terrified about being overweight	Always	Usually	Often	Sometimes	Rarely	Never
2. Avoid eating when I am hungry	Always	Usually	Often	Sometimes	Rarely	Never
3. Find myself preoccupied with food	Always	Usually	Often	Sometimes	Rarely	Never
4. Have gone on eating binges where I feel I may not be able to stop	Always	Usually	Often	Sometimes	Rarely	Never
5. Cut my food into small pieces	Always	Usually	Often	Sometimes	Rarely	Never
6. Aware of the calorie content of foods I eat	Always	Usually	Often	Sometimes	Rarely	Never
7. Avoid food with high a carbohydrate content (bread, rice, potatoes, etc.)	Always	Usually	Often	Sometimes	Rarely	Never
8. Feel that others would prefer if I ate more	Always	Usually	Often	Sometimes	Rarely	Never
9. Vomit after I have eaten	Always	Usually	Often	Sometimes	Rarely	Never
10. Feel extremely guilty after eating	Always	Usually	Often	Sometimes	Rarely	Never
11. Am preoccupied with a desire to be thinner	Always	Usually	Often	Sometimes	Rarely	Never
12. Think about burning up calories when I exercise	Always	Usually	Often	Sometimes	Rarely	Never
13. Other people think I'm too thin	Always	Usually	Often	Sometimes	Rarely	Never
14. Am preoccupied with the thought of having fat on my body	Always	Usually	Often	Sometimes	Rarely	Never
15. Take longer than others to eat my meals	Always	Usually	Often	Sometimes	Rarely	Never
16. Avoid foods with sugar	Always	Usually	Often	Sometimes	Rarely	Never
17. Eat diet foods	Always	Usually	Often	Sometimes	Rarely	Never
18. Feel that food controls my life	Always	Usually	Often	Sometimes	Rarely	Never
19. Display self-control around food	Always	Usually	Often	Sometimes	Rarely	Never
20. Feel that others pressure me to eat	Always	Usually	Often	Sometimes	Rarely	Never

21. Give too much time and thought to food	Always	Usually	Often	Sometimes	Rarely	Never
22. Feel uncomfortable after eating sweets	Always	Usually	Often	Sometimes	Rarely	Never
23. Engage in dieting behavior	Always	Usually	Often	Sometimes	Rarely	Never
24. Like my stomach to be empty	Always	Usually	Often	Sometimes	Rarely	Never
25. Have the impulse to vomit after meals	Always	Usually	Often	Sometimes	Rarely	Never
26. Enjoy trying new rich foods	Always	Usually	Often	Sometimes	Rarely	Never

APPENDIX B

Figure Rating Questionnaire

Please answer all 7 questions below.

1. Age: _____ years
2. Height: ____ feet, ____ inches
3. Weight: _____ pounds
4. Ethnicity (circle one):

Caucasian

European American

Hispanic or Latino

American Indian or Alaska Native

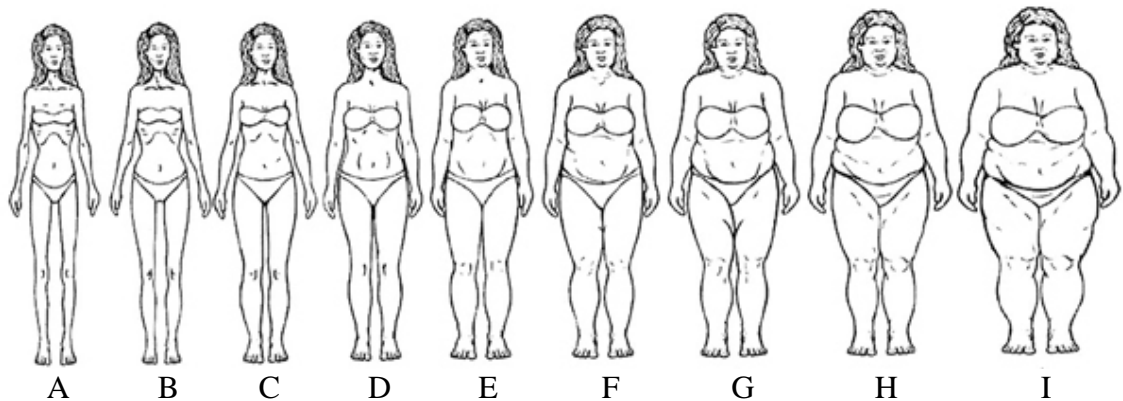
African American

Native Hawaiian or Other Pacific Islander

Asian American

Other (please indicate): _____

Look at the following figures and answer the questions underneath.



5. Which figure do you think is the ideal size/weight?
Write the letter of the figure in the box to the right.

5.

6. Which figure do you think you look like currently?
Write the letter of the figure in the box to the right.

6.

7. Which figure do you think most men would prefer?
Write the letter of the figure in the box to the right.

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VITA

Jondell Lafont was born in Houma, Louisiana, on October 22, 1986. Jondell is the daughter of Victoria Lafont and Noel Camardelle and the sister of Noelle Lafont and Logan Camardelle. After completing her work at Grand Isle High School in Grand Isle, Louisiana, she attended Nicholls State University in Thibodaux, Louisiana, and majored in Psychology. She received the degree of Bachelor of Arts in Psychology from Nicholls State University in May 2009. In August 2009, she entered the Health Psychology Master's Program at Texas State University.

Permanent Email Address: Jondell_Lafont@Yahoo.com

This thesis was typed by Jondell Lafont.