

BODY IMAGE DISTURBANCES: THE EFFECTS OF MEDIA ON
SELF-APPRAISAL AND IDEAL MATE SELECTION

A Senior Honors Thesis

By

SARA KAY LITZINGER

Submitted to the Office of Honors Programs
& Academic Scholarships
Texas A&M University
In partial fulfillment of the requirements of the

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Group: Psychology I

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Approved as to style and content by:



David H. Gleaves



Edward A. Funkhouser

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ABSTRACT

Body Image Disturbances: The Effects
of Media on Self-Appraisal and Ideal
Mate Selection. (April 2000)

Sara Kay Litzsinger
Department of Psychology
Texas A&M University

Fellows Advisor: Dr. David H. Gleaves
Department of Psychology

Previous research indicates that while media images of women and men are becoming more thin and muscular (respectively), the size and weight of American people is increasing. Several researchers have found that media images of ideal body types are highly related to body dissatisfaction and negative self-evaluation. Although some researchers have found that interventions regarding media images (i.e. education about the unrealistic nature of these images) negate the effect of media images on body dissatisfaction, most researchers have found no effect. The purpose of this study is to determine the effects of printed media images and interventions on participants' perceived body image, ideal body image, ideal body shape for the opposite sex, and current mood state. Five hundred and twelve undergraduates (males $n=249$, females $n=263$) viewed a slideshow containing either ideal, average, or overweight male and female images. After the slideshow, half of the participants ($n=258$) received an intervention, which consisted of a handout explaining techniques commonly used by the media to enhance the appearance of models (e.g., airbrushing, image splicing, and resizing). Measures of body dissatisfaction, perceived body image, ideal body image, ideal body shape of the opposite sex, depression, anger, anxiety, and vigor will be

compared from pre-test to post-test using Analysis of Variance, in order to determine the effects of the images and intervention on the dependent variables. Because of the lack of an effect of the manipulation, there was limited ability to test the effectiveness of the intervention. Future research similar to the current study should not present participants with both male and female images. To prevent possible confounds, participants should view either ideal, average, or overweight men or women.

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Body Image Disturbances: The Effects Of Media On
Self-Appraisal And Ideal Mate Selection

INTRODUCTION

An increasing number of men and women are dissatisfied with their current weight or body shape. It is likely that these people have what is referred to as disturbed body image. Body image is defined as the self-perception of appearance that includes both perceptual experience and subjective evaluation (Heatherton, & Hebl, 1998). A disturbance can occur when an individual inaccurately perceives his or her own body size (Heatherton, & Hebl, 1998).

Although many hypotheses have been developed regarding the etiology of body image disturbance, much research blames the mass media for the increase in body image disturbances. Although on the surface, this trend appears minor, its impact may in fact be great. Disturbances in body image can lead to the development of more detrimental problems, such as chronic dieting, compulsive exercise, or disordered eating (Heatherton, & Hebl, 1998). It is imperative to better understand why people are not satisfied with their bodies, and how this trend may be reversed. The purpose of this study is to better understand how printed media images affect both men and women, and to explore a brief intervention designed to neutralizing these effects.

The Changing Ideal

The ideal feminine body, as determined by cultural norms, has fluctuated greatly over the last thirty years (Garner, Garfinkel, Schwartz, & Thompson, 1980; Harrison, & Cantor, 1980; Spillman, & Everington, 1989; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Mazur (1986) reported that this cultural ideal changes in accordance to the current aesthetic standards of the corresponding time period.

In their landmark study, Garner, Garfinkel, Schwartz, and Thompson (1980) investigated weight and measurement (bust/waist/hip) trends among *Playboy* Centerfolds and Miss America Pageant Contestants. This sample was chosen,

This thesis follows the style and format of the Journal of Consulting and Clinical Psychology.

because they were believed to represent the ideal standard set for women. While Garner et al. (1980) found significant decreases in the average weight, bust, and hip measurements of *Playboy* Centerfolds, their waist measurements were significantly larger. This suggested that the standard "ideal" had moved from a voluptuous, hour-glass figure, to a more tubular, lean build (Garner et al. 1980; Morris, Cooper, & Cooper, 1989). Although all Miss America Pageant Contestants experienced an average weight loss of 0.28 lb. (0.17 kg) per year, pageant winners weighed significantly less than non-winning contestants (Garner et al. 1980).

Extending the aforementioned study, Wiseman, Gray, Mosimann, and Ahrens (1992) investigated the measurements of *Playboy* Centerfolds and Miss America Pageant Contestants from 1979 through 1988. Wiseman et al. (1992) found that while Miss America Pageant Contestants body size continued to decrease, *Playboy* centerfolds weight remained stable. The majority of women examined (60% of Miss America contestants and 69% of *Playboy* centerfolds) maintained weights 15% or more below their expected body weight (Wiseman et al. 1992). This is important to note because, according to the DSM-IV (American Psychiatric Association, 1994), failure to sustain weight above this level is one of the main criteria for anorexia nervosa.

Similarly, Morris et al. (1989) investigated female fashion models from 1967 to 1987 and noted a significant increase in height and waist measurements. While no changes in hip measurements were noted, bust measures decreased. In another study, Spitzer, Henderson, and Zivian (1999) investigated the changing body sizes of *Playboy* centerfolds, Miss American Pageant winners, and *Playgirl* models. Whereas *Playboy* centerfolds maintained their below-average weight, the body weight of Miss America Pageant winners plummeted significantly. At the same time, *Playgirl* models and North American men and women significantly increased in size. Spitzer et al. (1999) noted that whereas *Playgirl* models may appear larger due to increased muscularity, the average North American seems to be gaining fat instead. Furthermore, this disparity has led to an even larger discrepancy in the ideal body and the average body.

Petrie, Austin, Crowley, Helmcamp, Johnson, Lester, Rogers, Turner, and Walbrick (1996) examined two popular male magazines (*Esquire* and *GQ*) and tracked the changing male ideal. Contrary to the aforementioned studies, Petrie et al. (1996) found that the ideal male has not changed. This inconsistency has two possible explanations. First, in order to obtain accurate measurements, only certain types of pictures were used. Figures that were turned to the side or wore loose clothing were excluded. Second, it is possible that the measurements used were not sensitive enough to detect changing muscle definition.

In conclusion, the majority of the research suggests that while the feminine ideal is growing thinner, the average American woman is actually getting heavier (Garner et al. 1980; Nemeroff, Stein, Diehl, & Smilack, 1994; Spillman, & Everington, 1989). Although both the ideal male and the American male are getting larger, it has been speculated that the ideal male image is becoming more muscular, while the average American male is becoming larger due to increased body fat (Nemeroff et al. 1994; Spitzer et al. 1999).

Magazines

Recently, popular gender-based magazines have stressed dieting and fitness more than ever before (Anderson et al. 1992; Garner et al. 1980; Petrie et al. 1996; Wiseman et al. 1992). Because of their popularity and wide-readership, magazines can have a great impact on body image disturbances.

Garner et al. 1980 examined the number of dieting for weight loss articles in six popular women's magazines (*Harper's Bazaar*, *Vogue*, *McCall's*, *Good Housekeeping*, *Ladies Home Journal*, and *Woman's Day*), and found a significant increase in dieting articles from 1959 through 1978. Wiseman et al. 1992 continued the aforementioned study, by examining popular women's magazines published between 1959 and 1988. The researchers found a significant increase in the number of dieting and exercise articles (Wiseman et al. 1992). In another study, Petrie et al. 1996 investigated fitness article/advertisement trends among two popular male magazines (*GQ* and *Esquire*).

They found that while messages of health and fitness have increased over the last thirty-two years, weight and beauty messages have declined (Petrie et al. 1996).

Several studies have found that women's magazines contain significantly more advertisements and articles pertaining to weight loss and fitness than men's magazines (Anderson et al. 1992; Nemeroff, Stein, Diehl, & Smilack, 1994; Silverstein, Perdue, Peterson, & Kelly, 1986). Silverstein et al. 1986 analyzed the contents of 48 issues of popular magazines directed at either men or women. They found that the total number of advertisements for food products in women's magazines was 1179, while men's magazines contained a total of ten food-related advertisements. Nemeroff et al. 1994, also compared popular men and women's magazines over time. They found a decrease in emphasis on weight loss for women, and an increase in emphasis on weight loss for men. These differences may represent a more global trend towards a healthier lifestyle, rather than achieving a more slender physical appearance. In another study, Anderson and DiDomenico, (1992) found that women's magazines contained over ten times as many advertisements and articles promoting weight loss than popular men's magazines. Interestingly, this ratio matches the number of anorexia nervosa cases reported among American men and women.

Researchers have found that media exposure may lead participants to feel negatively about their body and/or have negative affect (Posavac, Posavac, & Posavac, 1998; Harrison, & Cantor, 1997; Irving, 1990; Henderson-King, Henderson-King, 1997; Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999; Stice, & Shaw, 1994). Irving (1990) investigated the impact of exposure to thin, average, and overweight models. She found that, regardless of bulimic symptomatology, women who viewed thin images had lower self-evaluations than those who viewed either average or overweight models. In another study, participants were exposed to either ideal fashion models or neutral images (Posavac, Posavac, & Posavac 1998). They found that women in the ideal condition were more distressed and reported more weight concerns than participants in the average or neutral groups. In a similar study, Cash, Cash, and Butters (1983) examined participants responses to non-attractive, attractive, or attractive models. They found that

while participants exposed to the attractive conditions rated their own attractiveness lower than the non-attractive group, no overall effects for body dissatisfaction were observed.

Some researchers have investigated how media exposure may be related to disordered eating behavior. Harrison and Cantor (1997) examined the effects of media use on college women's eating disorder symptomatology. For women, magazine exposure predicted eating disorder symptomatology, drive for thinness, and increased body dissatisfaction. For males printed media exposure predicted endorsement of thinness and dieting among their ideal female. Stice and Shaw (1994) examined the effects of thin models, average models, or a neutral image. They found that exposure to thin-ideal models produced stress, guilt, shame, insecurity, and body dissatisfaction. In another study, Pinhas et al. 1999 investigated changes in women's affect. Participants viewed pictures of models who represent the thin ideal and completed several body image and mood measures. They found that women were more depressed and angry following exposure to female fashion models than those who viewed the neutral images.

Interventions

Until recently, interventions used to ameliorate or prevent sub-clinical anorexic or bulimic symptoms in the general population have been unexplored. Rabak-Wagener, Eickhoff-Shemek, and Kelly-Vance (1998) implemented an undergraduate educational intervention class that focused on media and fashion analyses. The intervention group had more significant changes in body image perceptions following the intervention than the control group. Also, the intervention group had significantly more changes in beliefs regarding body image than comparison groups. In another study, Springer, Winzelberg, Perkins, and Taylor (1999) evaluated an undergraduate body image course entitled "Body Traps: Perspectives on Body Image". They found that participants in the intervention program significantly decreased the frequency and severity of disordered eating and body dissatisfaction. Stice, Mazotti, Weibel, and Agras (2000) tested a dissonance-based targeted preventive intervention for disordered eating. They found

that participants of this program had decreased body dissatisfaction, dieting, negative affect, bulimic symptomatology, and thin-ideal internalization.

Because the majority of body image research has been conducted using female participants, this study adds to the literature by using both male and female participants. The present study was designed to examine how undergraduate males and females are affected by either ideal, average, or overweight male/female models. We also investigated the effects of a brief intervention designed to educate participants on techniques the media uses to enhance the appearance of models through airbrushing, image splicing, and resizing. Consistent with previous literature, participants exposed to ideal/thin images were expected to report more body dissatisfaction, increased depression and increased anxiety, than participants who viewed average or overweight images. Individuals exposed to ideal images were hypothesized to endorse a thinner ideal male and female body shape, while participants in the average and overweight groups were believed to endorse a more neutral ideal image. Regardless of type of image viewed, participants who received the intervention were expected to experience increased body satisfaction, a more positive mood state, and believed to endorse a more neutral male/female ideal body shape.

METHOD

Participants

Participants were 512 male and female undergraduate students (males $n=249$, females $n=263$) enrolled in an Introductory Psychology course at a Southwestern University (mean age = 19, range = 17-25). Participants were offered course credit in compensation for their participation. The majority of the participants were Caucasian (85.9%). The remainder of participants were Asian (1.8%), African-American (6.9%), Native American (2.0), Hispanic (2.2%), or other (1.4%). The average female participant was 19 years old, 5 feet 5 inches tall and weighed 135 pounds. The average male participant was 19 years old, 5 feet 11 inches tall and weighed 174 pounds.

Design

A four-way 2 x 3 x 2 x 2, between subjects, factorial design was used. Gender of slide (male/female), group (ideal, average, or overweight), gender of participants (male/female), and intervention (intervention received, intervention not received) were all between subjects factors. Pre- and post-test measures of the dependent variables were taken - see below. Participants were randomly assigned to one of three conditions (ideal, average, or overweight), which corresponded to the type of human images the participant viewed. Within each group, participants were randomly assigned to either an intervention or no intervention condition. Participants in the intervention group received information regarding techniques frequently used by the media to enhance the appearance of models, such as airbrushing, image splicing, and resizing. Participants in the no intervention condition did not receive this information.

Procedures

The single study was presented to participants as two separate studies. This deception was necessary to avoid setting up a demand characteristic that may have led to confounded results. Two investigators were present during all data collection sessions, to make it appear as though two separate studies were being conducted. The first investigator told participants that the first session was a validation of measures study, and distributed base-line questionnaires to each participant. Each packet

contained: 2 informed consents, the Body Satisfaction Scale, the Profile of Mood States, and the Body Image Assessment-Group Administration (see below). Participants were told to simply complete the above questionnaires. Upon completion, the above investigator concluded the "first session". The second investigator informed participants that the purpose of the "second session" was to investigate the effects of persuasion in the media. Another packet was distributed to participants containing: the Persuasion Advertisement Scale-General, the Persuasion Advertisement Scale-Situational, an intervention sheet (to those in the intervention condition), the Body Satisfaction Scale, the Profile of Mood States, and the Body Image Assessment-Group Administration. Participants were told to complete the Persuasion Advertisement Scale-General only. Then, all participants viewed a slideshow, containing ten images (5 male and 5 female). Each slide was presented for one minute. According to the condition of the group, they viewed either all ideal, average, or overweight images. To ensure that each participant studied each slide carefully, they were asked to fill out the Persuasion Advertisement Scale-Situational in accordance with each presented slide. Upon completion of the slideshow, participants completed the remainder of the packet at their own pace. Participants were verbally debriefed as a group and they received a written debriefing statement.

Measures

The Body Image Assessment - Group Administration (BIA; Williamson, Davis, Bennett, Goreczny, & Gleaves, 1989; Williamson, 1990) consists of nine male and/or female silhouettes that assess current body size (CBS), ideal body size (IBS), body dissatisfaction (the discrepancy between CBS and IBS), ratings of opposite sex ideal, and what body size the opposite sex prefers. The test has been found to have good test-retest reliability, concurrent validity, and convergent validity (Williams, Gleaves, Cepeda-Bentio, Erath, & Cororve, 1998).

The Body Satisfaction Scale (BSS; Slade, Newton, Brodie, & Kiemle, 1990) was designed to measure participants' satisfaction/dissatisfaction with 16 body parts. The BSS consists of three scales (general overall body dissatisfaction, head dissatisfaction,

and body dissatisfaction). This measure has been found to have good internal consistency (Thompson, 1996).

The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) is a 6 scale mood inventory, containing tension-anxiety, depression-dejection, anger-hostility, vigor-activity, fatigue-inertia, and confusion-bewilderment. The POMS has a high internal consistency for each of the mood state scales and good test-retest reliability.

Persuasive Advertisement Scale - Situational (PAS; developed for this study) is a scale that was designed to assess the persuasiveness of individual, printed media advertisements. This measure served as a distracter task.

Persuasive Advertisement Scale - General (PAS; developed for this study) is a scale that was designed to assess the participants' overall susceptibility to printed media advertisements. This measure served as a distracter task.

RESULTS

All of the data was analyzed using three-way analysis of covariance (ANCOVAS). The dependent variables were the post-test scores from the BIA, BSS, and POMS, and the covariates were pre-test scores from the same measures. The independent variables were gender (male/female), type of slide (ideal, average, or overweight male and female models), and intervention (received or not received). In this study, all of the assumptions of ANOVAS were met. The covariates correlated highly with the dependent variables, and there was no interaction between covariates and independent variables.

Mood

There was a main effect for group (ideal, average, or overweight images), $F(2,485) = 4.23, p = .015$. See Table 1. Participants in the ideal slide condition had higher scores on the post-POMS fatigue scores than participants in the average or overweight conditions. Participants in the overweight condition had the lowest scores for fatigue. See Figure 1.

With regard to post-POMS vigor scores, a three-way interaction was found for group X intervention X gender $F(2,492) = 4.63, p = .010$. For participants who received the intervention, there was a two-way interaction for group x gender $F(2,249) = 3.33, p = .037$. See Figure 2 & 3. Intervention X gender effects were moderate, and approached significance $F(1,159) = 3.09, p = .081$.

No main effects or interactions were found in post POMS anger scores. Both the intervention X group $F(1,487) = 2.81, p = .094$, and the group X intervention X gender $F(2,487) = 2.69, p = .069$ interactions, were approaching statistical significance. There were no main effects or interaction effects for post POMS tense scores.

Body Image

There were no significant main effects or interaction effects for the Body Satisfaction Scale-Body Scale post score. The covariate pre-BSS-Body predicted most of the variance in post test scores $F(2,502) = 2671.19, p < .0001$.

For post-ideal body size (IBS) in males there was a moderate effect, which approached significance $F(1,243)=3.59, p=.059$.

Table 1

Analysis of Covariance Results

Body Satisfaction Scale-Post Body Scale

Effect	F	p
Group	0.24	.79
Intervention	0.56	.45
Gender	1.09	.30
Group X Intervention	0.13	.88
Group X Gender	0.20	.82
Intervention X Gender	1.29	.26
Group X Intervention X Gender	0.40	.67

Male-Post Discrepancy Score

Effect	F	p
Group	0.29	.75
Intervention	2.68	.10
Group X Intervention	0.45	.64

Female-Post Discrepancy Score

Effect	F	p
Group	1.28	.28
Intervention	0.01	.93
Group X Intervention	0.21	.81

Males-Post Ideal Body Size

Effect	F	p
Group	0.46	.63
Intervention	3.59	.06
Group X Intervention	0.25	.78

Table 1 Continued

Females-Post Ideal Body Size

Effect	F	p
Group	2.56	.08
Intervention	0.06	.80
Group X Intervention	0.20	.82

POMS-Post Tense Scores

Effect	F	p
Group	1.65	.20
Intervention	0.90	.34
Gender	0.70	.40
Group X Intervention	0.00	1.00
Group X Gender	0.84	.43
Intervention X Gender	0.36	.55
Group X Intervention X Gender	0.02	.98

POMS-Post Depression Scores

Effect	F	p
Group	1.90	.15
Intervention	0.27	.60
Gender	0.10	.75
Group X Intervention	0.34	.71
Group X Gender	0.03	.97
Intervention X Gender	2.81	.09
Group X Intervention X Gender	2.69	.07

Table 1 Continued

POMS-Post Anger Scores

Effect	F	p
Group	0.99	.37
Intervention	0.03	.87
Gender	2.34	.13
Group X Intervention	0.05	.95
Group X Gender	0.59	.56
Intervention X Gender	0.17	.68
Group X Intervention X Gender	1.96	.14

POMS-Post Vigor Scores

Effect	F	p
Group	1.38	.25
Intervention	0.05	.82
Gender	0.35	.56
Group X Intervention	0.01	.99
Group X Gender	0.28	.75
Intervention X Gender	0.58	.45
Group X Intervention X Gender	4.63	.01

Ideal Slides-POMS Post Vigor Scores

Effect	F	p
Intervention	0.01	.93
Gender	0.05	.83
Intervention X Gender	3.09	.08

Average Slides-POMS Post Vigor Scores

Effect	F	p
Intervention	0.14	.71
Gender	0.02	.88
Intervention X Gender	0.65	.42

Table 1 Continued

Overweight Slides- POMS Post Vigor Scores

Effect	F	p
Intervention	0.00	.97
Gender	1.01	.32
Intervention X Gender	6.92	.009

Males-POMS Post Vigor Scores

Effect	F	p
Group	1.20	.30
Intervention	0.40	.53
Group X Intervention	2.09	.13

Females-POMS Post Vigor Scores

Effect	F	p
Group	0.37	.69
Intervention	0.17	.68
Group X Intervention	2.54	.08

POMS-Post Fatigue Scores

Effect	F	p
Group	4.23	.02
Intervention	0.37	.54
Gender	0.18	.67
Group X Intervention	0.28	.75
Group X Gender	0.09	.91
Intervention X Gender	0.87	.35
Group X Intervention X Gender	1.45	.24

Figure 1. Post POMS Fatigue Scores by Group

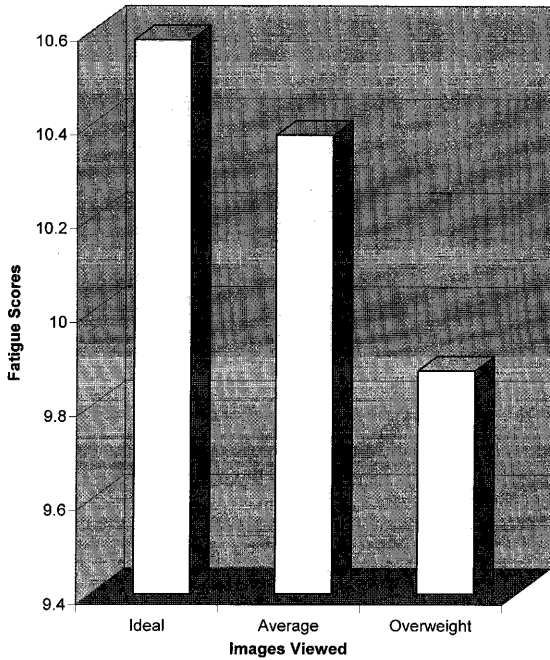


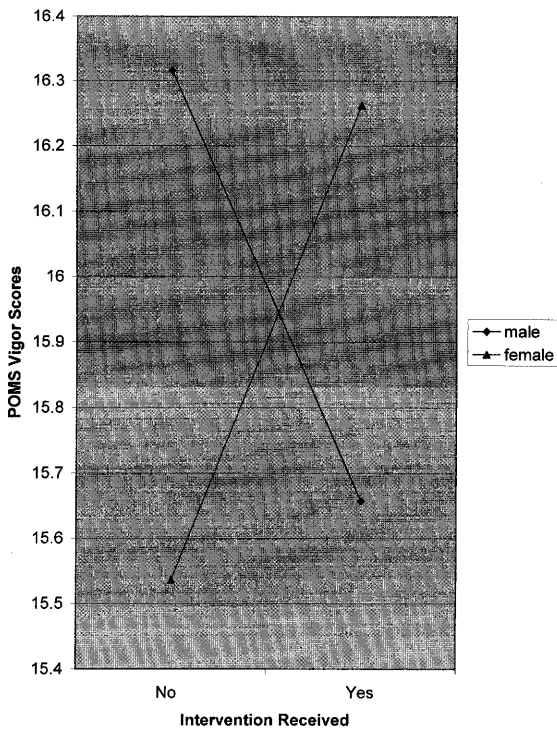
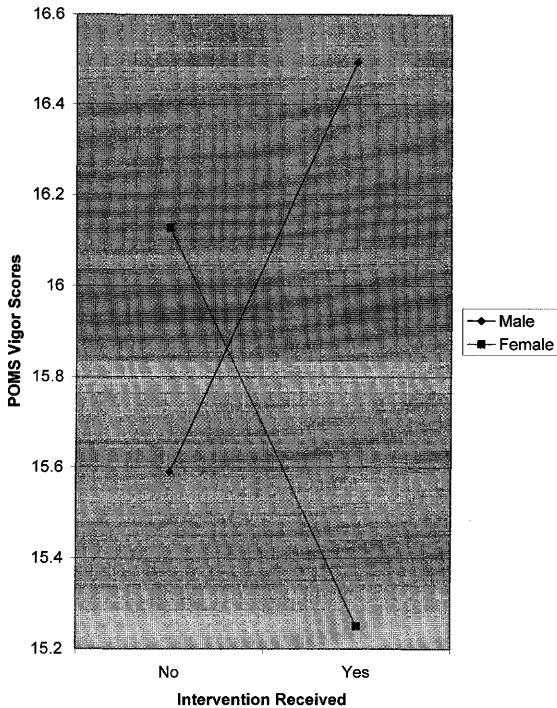
Figure 2. Ideal Images - Intervention by Gender Effects

Figure 3. Overweight Images - Intervention by Gender Effects



DISCUSSION

Contrary to previous studies, the results of the present study did not find printed media images to have an effect on body image disturbances, and little impact on current mood states. Because of the lack on an effect of the manipulation, there was limited ability to test the effectiveness of the intervention.

The current study did produce some noteworthy findings. A main effect was found for group (ideal, average, or overweight images). More specifically, participants in the ideal condition had higher fatigue scores than the average or overweight conditions. Participants in the overweight condition had the lowest fatigue scores. Participants who were exposed to the ideal images may have knowingly or subconsciously compared themselves to the images. If they did not perceive themselves to look comparable to the image, the participant may have experienced negative affect, such as fatigue. Participants in the average and overweight conditions may have perceived themselves to look more similar to the images, and therefore, did not experience as much fatigue.

A three-way interaction was found for group X intervention X gender, with regard to post-POMS vigor scores. Males in the ideal condition who received intervention had significantly lower vigor scores than males who did not receive the intervention. Females in the ideal condition who received the intervention had significantly higher vigor scores than females who did not receive the intervention. In the overweight condition, males who received intervention had significantly higher vigor scores than males who did not receive the intervention. Females in the overweight condition who received the intervention had significantly lower POMS vigor scores than females who did not receive the intervention.

There are several ways to interpret the results. First, it is possible that such images simply do not have the affect that has been hypothesized and found in previous studies. Participants may not have experienced a reaction to the images because they have become inoculated to them. Everyday, people are inundated with pictures of attractive, slender men and women. This excessive exposure may cause people to

become desensitized, which may explain the participant's lack of response. It could be possible that the images selected for this study did not generalize to the broader variety of images found in the mass media. If this is true, then it is impossible to determine how the media effects mood and body disturbances based on the results of this study. In this study, only ten images were used (five males/five females). It is possible that participant's were not exposed to enough images, and therefore did not experience any reaction to the pictures. Lastly, a confound may have been present. Lastly, each participant was shown either ideal, average, or overweight images of both males and females. By showing participants images of both sexes it may have been impossible to sort out possible effects of viewing slides of one sex or the other. Whereas the ideal body shape for females is lean and tubular, the ideal body shape for males is lean and muscular. The images were shown together, which may have caused a deleterious effect, causing each image to cancel the other one out. It is possible that the images may have produced an effect if shown separately (i.e., only showing groups either ideal, average, or overweight men or women), and should be attempted in future research. Due to the lack of a significant mood or body manipulation, it is not feasible to evaluate the effectiveness of the intervention technique used in this study.

There were several other limitations of this study. Due to time constraints, the images presented in this study were studied minimally by the researchers before the beginning of the study. In the future, investigators should conduct pilot studies to determine each image's validity, before presenting participants with the images.

Although a variety of magazines were used, it was difficult to find a variety of ideal, average, and overweight images. It appeared that the majority of magazines were filled with only ideal men and women, and lacked average or overweight images. Most of the images shown to participants were manipulated, in order to make them appear larger, or smaller than they were in the original image. It is possible that participants could have recognized that the images presented were altered. If true, this could explain why participants may not have been as troubled by the images as expected.

CONCLUSION

In conclusion, the possible use of interventions to buffer the negative effects of the media on body image should continue to be a topic of research. Future research similar to the current study should not present participants with both male and female images. Instead, participants should view either ideal, average, or overweight men and women. This would prevent further possible confounds.

Future studies should also include college, community, and clinical samples. This combination would allow the results to possess more external validity, which would allow the results to generalize to a broader group of people. Until recently, little cross-cultural research has been conducted regarding body image disturbances and the media. This perspective would be interesting to explore, because some studies have shown that some cultural groups are more sensitive to body image than others. Lastly, more realistic, computer-aided images can be created as stimuli. Because average and overweight images are extremely difficult to locate in magazines, it is important to develop valid, realistic images to present to participants. Such images could include small details such as muscle definition, which make the images appear more realistic.

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VITA

Sara K. Litzsinger
19426 Craigchester Lane
Spring, Texas 77388

- Education** Bachelor of Science, Psychology Texas A&M University
 • Overall GPR 3.629 • Psychology GPR 3.923
- Honors** AT&T Academic Scholarship, 1995-1999
 Dean's List, 1997, 1998
 Psi Chi - Psychology Honor Society, 1997
 Psi Chi Chairman, 1998-1999
 Golden Key Honor Society - Academic Honor Society, 1998
 University Undergraduate Research Fellow, 1999-2000
 Sigma Xi - Honor Society of Scientific and Engineering Research, 2000
- Papers and Presentations** Litzsinger, S., Gleaves, D., and Williams, T. *Body image disturbances: The effects of media on self-appraisal and ideal mate selection.* Poster presented at the Texas A&M University Research Week, March 2000. College Station, Texas.
- Williams, T., Litzsinger, S., & Gleaves, D. (1999). *Childhood sexual abuse, body image, and disordered eating: A review.* Manuscript in preparation for submission.
- Williams, T., Gleaves, D., Litzsinger, S. *Childhood sexual abuse, body image, and disordered eating: A structural modeling analysis.* Poster presented at the Association for the Advancement of Behavioral Therapy Conference. November 1998, Washington, D.C.
- Clinical Experience** Student Counseling Helpline Volunteer
 • Listened to callers problems and provided them with referrals and information pertaining to their situational needs.
- Substance Abuse and Mood Disorder Research
 • Collected and managed follow-up data in a federally funded substance abuse research program
- Eating Disorders, Dissociation, Sexual Abuse and Body Image Research
 • Research assistant to Dr. David Gleaves