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Manipulation of psychological state and trait properties of body image

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MANIPULATION OF PSYCHOLOGICAL STATE AND TRAIT PROPERTIES OF
BODY IMAGE

A Thesis

Presented to

The Faculty of the Department of Psychology
San José State University

In Partial Fulfillment

of the Requirements for the Degree

Masters of Arts

by

Aline Marie Kirby

August 2007

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ABSTRACT

MANIPULATION OF PSYCHOLOGICAL STATE AND TRAIT PROPERTIES OF BODY IMAGE

by Aline Marie Kirby

The current study examined the state and trait-like properties of female body image. Body image was manipulated through exposure to the media ideal and through exposure to a psycho-educational intervention. It was expected that exposure to the media ideal would decrease female body image and that exposure to the psycho-educational intervention would increase body image. Contrary to expectations, mixed evidence was associated with exposure to the media ideal. While women experienced a higher level of internalization of the media messages, they felt less anxious, tense, or nervous about their physical appearance post-image ideal. Further, there were no between-group differences on body image post-intervention, suggesting that manipulating negative body image attitudes may require longer, more intensive treatment.

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Introduction

During the last 20 years there has been a sizeable transformation in the ideal image of a person's own body (Garner, Garfinkel, Schwartz & Thompson, 1980). The shift in body size satisfaction, from a more voluptuous figure to a thinner ideal, is a reflection of the societal shift in body image perceptions. Increasingly, women desire a thin body structure as they are exposed to the attitudes and beliefs associated with the positive effects of possessing and retaining this body type (Meyers & Biocca, 1992). The relative influence of this changing ideal is epitomized by the frequency of dieting and body image disturbances among women (see for example Garner et al., 1980; Irving & Berel, 2001).

There are a multitude of factors, biological, social, and interpersonal, that influence body image (Thompson, Heinberg, Altabe & Tantleff-Dunn, 1999). Sociocultural dynamics, particularly the media, have been implicated as risk factors related to the change in the body image ideal. Sociocultural factors include the images and the messages being relayed, the pressure associated with attaining the societal ideal, and the negative impact of comparisons with the ideal (Thompson et al., 1999). Although there are various explanations for the development and maintenance of body image disturbance, this investigation focuses on the sociocultural influence of the media.

For the last two to three decades, research suggests that the societal standard for the female ideal has been changing. Garner et al. (1980) examined archival data of self-reported height, weight, bust, waist, and hip measurements for *Playboy Magazine* over the past 20 years, and height and weight measurements for Miss America Pageant

Contestants from 1959 to 1978. The results indicate that for both groups, the average weights had significantly decreased, confirming the shift in the ideal standard.

Additional changes for the *Playboy* models included decreased bust sizes, increased waists sizes, and smaller hips. The researchers suggest that these measurements represent the more tubular body type presented as the current idealized shape. Byrd-Bredbenner and Murray (2003) examined anthropometric measurements of idealized female body images in the media, namely *Playboy*, Miss America, and fashion models, with that of young women in general. Their results indicate that the idealized images all tend to be taller and weigh less than the average women, with many meeting criteria for being underweight (2003). Specifically, their results indicated that through the decades, the 20's through the 70's, each group experienced a significant decrease in mean BMI with the exception of the average woman, who experienced an increase.

A multitude of body image definitions have been proposed in recent literature. Myers et al. (1992) define body image as a psychological construct, formed through a mental representation of one's self. Lavin and Cash (2001) propose that body image relates to the attitudes and beliefs regarding the relative significance and influence of appearance in life. Posavac, Posavac & Weigel (2001) define the process by which body image disturbances occur, stating that disturbances arise from a distortion in perception, behavior, or cognition relative to body shape. For the present investigation, body image will be defined as the mental construction of one's outer appearance. An important feature of this mental construction is the comparison of one's own body image to the standard image set by the current culture.

Body Image and the Media

Research has demonstrated the negative effects of the current societal standards on female body image (Thompson et al., 1999). Specifically, studies have shown that when women are exposed to the current societally sanctioned standards they experience greater body image dissatisfaction than women in control conditions. Lavin and Cash (2001) evaluated the effects of media messages on the social advantages of physical attractiveness on women's body image. These researchers (2001) found that women exposed to audiotapes relaying appearance-related information reported more negative body-image states versus women in the control group. Durkin and Paxton (2002) examined body satisfaction in females in Grades 7 and 10, following exposure to 10 ideal images selected from magazines. Their results indicate a significant difference in body satisfaction between those exposed to the ideal images and those exposed to control images, with the ideal image exposure resulting in lower body satisfaction. Posavac et al. (2001) provided further evidence, exposing women to either 20 slides of models from fashion magazines or slides of car images. Results indicate that women who were exposed to the slides of fashion models reported more concern about weight and were more likely to make negative self-statements with a desire for thinness than women in the control condition (Posavac et al., 2001).

Social Comparison

Social comparison, that is, comparing oneself to others, has been proposed as the mitigating process by which the media impacts female body image (Festinger, 1954; Richins, 1991; Posavac et al., 2001). Festinger (1954) proposed that people have an

intrinsic propensity to formulate opinions and evaluations by means of social comparison. Social comparison is illustrated when a woman evaluates herself relative to images portrayed by the media. When women compare themselves to these unrealistic and idealized images it creates an incongruity between their body image and the societal standard (Posavac et al., 2001). The incongruity perceived between the self and the ideal can lead some women to be displeased with their own bodies (Posavac et al., 2001; Richins, 1991). Within an understanding of social comparison, the media is setting the stage for a negative evaluation of one's image by presenting an unrealistic ideal.

Richins (1991) investigated whether women compare themselves to the idealized images portrayed in advertising, how widespread this type of comparison is in the population; and then sought to determine the effects of comparison. Results indicated that female college students do compare themselves to models in ads. Results demonstrated that when women compared themselves to the images portrayed, their comparison standards for attractiveness increased while satisfaction with their own attractiveness decreased (Richins 1991).

Cattarin, Thompson, Thomas, and Williams (2000) examined the negative effects of media on body image using brief exposure to advertising's depictions of beauty. Participants either received neutral, comparison, or distraction instructions. Cattarin and colleagues found that women in the comparison condition who were exposed to the images reflecting the societal standard reported a higher rate of comparison than participants in the other conditions.

Media Skepticism

The literature appears clear that body image is typically negatively impacted by the media's ideal. Presently, researchers are interested to know whether it is possible to prevent the negative impact of the media. Posavac et al. (2001) investigated the impact of three interventions on moderating the impact of media images. The interventions proposed were created to disrupt the process of social comparison by targeting the techniques used in the media to create these images, teaching recipients to be critical consumers. Overall, these investigators demonstrated that women who engaged in an intervention prior to media exposure reported lower levels of body image disturbance in relation to women in the control condition. Thus, women in the intervention conditions were less likely to engage in social comparison (Posavac et al. 2001).

Irving and Berel (2001) investigated the impact of two media literacy interventions and one video-only intervention on increasing media skepticism and reducing negative body image. All three interventions increased media skepticism, specifically by reducing women's perception of the realism of the images portrayed in the media. However, none of the interventions significantly affected body image variables. Overall, these investigators demonstrated the ability to create media skepticism in their research participants but were not successful at mediating the negative impact of the media on female body image.

Taken together, it is not clear to what extent body image is an alterable experience. It remains equivocal whether body image and its associated features are

psychological traits or, instead, are malleable under certain contexts and thus are more like psychological states.

The Present Investigation

Body image is multidimensional and is comprised of a number of subcomponents. The primary purpose of the present investigation is to experimentally manipulate body image to delineate which features/subcomponents change and are thus more state-like, and which are less likely to change being more trait-like. The subcomponents examined in the present investigation include body image satisfaction, anxiety, appearance evaluation, social comparison, social-construction, internalization of the societal ideal, and perceived pressure.

For the present investigation, a psychological state is defined as a psychological experience or behavior that varies across environmental settings, being temporary and changeable. A psychological trait is defined as a stable predisposition to behave in certain ways, being a relatively enduring pattern of behavior. This study will use the media to explore the state and trait-like properties of body image. Broadly, it is hypothesized that exposure to a presentation of images of the current media ideal will result in a worse self-evaluation of body image. Specifically, the current study tested the hypothesis that exposure to an image presentation of the media ideal in comparison to an image presentation of home and garden would result in more negative body image evaluations. Through this resultant lowered self-evaluation, the current study proposes to determine the components of body image that are changeable.

The implication of determining the state and trait features of body image lie with the prevention and treatment of negative body image and body image disturbance. While examining the state and trait-like properties of body image, as a secondary analysis, the present investigation will also investigate the effectiveness of a psycho-educational intervention. Broadly, it is hypothesized that exposure to a brief psycho-educational manipulation using media skepticism-based strategies will result in an improved self-evaluation of body image. Specifically, the current study tested the hypothesis that exposure to a media skepticism intervention in comparison to no intervention would result in more positive body image evaluations.

Method

Participants

Participants were 79 female students (ages 18 – 33) who were enrolled in an introduction to Psychology course at San José State University. Students completed the study in groups of 10 to 15. Each group was randomly assigned to one of the following treatment conditions: (a) psycho-educational intervention ($n = 39$); (b) no-intervention control ($n = 40$). One participant in the control condition was unable to complete the experiment, and therefore was not included in the analyses, leaving a sample size of ($n = 39$). Students participated in the study to receive required experimental credit as established by the course. Participation was not restricted by age, body type, ethnicity or body image disturbance level.

Materials

Media Ideal Exposure. A PowerPoint presentation containing images of fashion models considered to be representative of the ideal image was created from pictures extracted from a variety of women's fashion magazines. The experimenters assembled a large sample of these body image depictions and evaluated them on their portrayal of the ideal image. The images evaluated as the most ideal body image were selected out of the original sample and presented again. The images with the highest level of consensual agreement about encompassing the ideal were incorporated into the slide show. This procedure was repeated until enough images were selected to generate a 3.5-minute slide show with each image being displayed for a period of 10 seconds, with a total of 21 images (20 ideal images and one instruction slide).

A pilot test was conducted with female undergraduate students to test the strength of the media ideal slide show. The results of the pilot study showed a significant difference between the experimental and control groups change score (pre-test score – post-test score), indicating that the experimental group had both a greater level of awareness and internalization of societal standards and that their self-evaluation of their body image decreased. This small pilot study supported the use of these materials in the current study.

Targeted Intervention. The experimental manipulation involved a psycho-educational intervention on media skepticism, shown with the goal of reducing the effects of media exposure on female body image scores. The manipulation was a 35-minute video, *Killing Us Softly 3: Advertising's Image of Women* featuring Jean Kilbourne (2000), that promotes adaptive behavior by teaching woman to evaluate the media critically. It is designed to challenge the believability of advertisements and their associated messages, critiquing ads and TV commercial images of women. Although the video focuses on gender issues, a significant portion focuses on the abilities of the media to create perfection. Kilbourne discusses many of the industries image enhancing skills, from simple touch ups through the creation of an ideal woman who is actually parts of various women pieced together.

In addition to the experimental condition, the study included a control condition. The control group was exposed to the exact set of procedures with the only difference being an absence of an intervention. During the time the experimental group received the

targeted intervention, the control group viewed a 35-minute video about ancient Egypt, containing no body image related content.

Point of Assessment Administration (i.e. time). Point of assessment administration consisted of three levels; one pre-test and two post-tests. In all conditions, participants were given an assessment battery pre-image ideal presentation, post-image ideal presentation, and post psycho-educational or control manipulation.

Psychological Measures

The dependent variables are body image and media influence scale scores. These variables were measured through a series of assessment batteries consisting of a number of standardized scales. As noted in the introduction, body image is comprised of a number of subcomponents. The measures in the present investigation were included to examine the following subcomponents of body image: body image satisfaction, anxiety, appearance evaluation, social comparison, social-construction, internalization of the societal ideal, and perceived pressure.

Body image and media skepticism were measured at three different intervals throughout the experiment. The pre-test was administered to measure the participant's base-line body image and media influence scores. These scores were not used as a pre-screening method but rather as a continuous variable to test the main hypothesis. A brief post-test measure was collected after the image ideal PowerPoint stimulus to measure the impact of the media exposure on the participant's body image and media influence scores. Finally, the post-assessment test was collected to measure the impact of the intervention on the participant's body image and media influence scores.

Body Image Satisfaction, Anxiety and Appearance Evaluation Scales. The Physical Appearance State and Trait Anxiety Scale (PASTAS) contains two subscales, weight and non-weight, of eight items each (Reed, Thompson, Brannick & Sacco, 1991). The trait scale was included to assess a general level of body image anxiety, and the state scale was included to assess changes that occur within the context of this experiment. Internal consistency for the PASTAS is Cronbach's alpha .82-.88 for the trait scale, Cronbach's alpha .82-.92 for the state scale, and test-retest reliability $r = .87$ (Thompson et al., 1999). The PASTAS is a 5-point Likert scale, 0-4 (0 = not at all, 4 = exceptionally so) for the state scale and 1-5 (1 = not at all, 5 = always) for the trait scale, with higher scores indicating greater levels of anxiety.

The Multidimensional Body-Self Relations Questionnaire-Appearance Scales (MBSRQ-AS) is a 34-item abbreviated version of the MBSRQ. The MBSRQ-AS was included to measure appearance-related satisfaction and includes the following subscales: Appearance Evaluation, Appearance Orientation, Overweight Preoccupation, Self-Classified Weight, and the Body Areas Satisfaction (Cash, 2000). Each subscale has satisfactory internal consistency and test-retest correlations (Cash, 2000). The MBSRQ-AS is a 5-point Likert scale, 1-5 (1 = definitely disagree, 5 = definitely agree), with higher scores indicating higher levels of body image concern.

The Body Image States Scale (BISS) contains 6 items measuring self-evaluation of body-image. The BISS has acceptable internal consistency (Cash, Fleming, Alindogan, Steadman & Whitehead, 2002). The BISS is a 9-point Likert scale, 1-9 (e.g.,

1 = extremely dissatisfied, 9 = extremely satisfied); lower scores reflect more negative body image states.

Body Image Social Comparison Scale. The Body-Image Ideals Questionnaire (BIQ) is an 11-item measure, in which participants rate their actual versus ideal self on a number of weight-appearance related attributes (Thompson et al., 1999). The scale is derived from a self-ideal framework, in that self-evaluations are based on how similar or discrepant one's self-evaluation is to their ideal standards (Cash & Szymanski, 1995). Three scores are derived: Discrepancy (self-ideal), Importance (importance of their ideal), and Weighted Discrepancy (cross product of Discrepancy x Importance). The BIQ internal consistency for women is Cronbach's alpha .75 for Discrepancy, .82 for Importance, and .77 for Weighted Discrepancy (Cash & Szymanski, 1995). The potential range of scores on the BIQ is -3 (very important congruence across all physical attributes) to +9 (very important and maximum discrepancies across all physical attributes); higher scores reflect greater self-ideal disparity with strongly held physical ideals.

Social Construction of Body Image. The Objectified Body Consciousness Scale (OBC) was developed from a feminist theory examining the social-construction of the female body (McKinley & Hyde, 1996). The OBC subscales include: body surveillance, body shame, and appearance control beliefs. Internal consistency scores for the three subscales are: surveillance scale, $\alpha = .89$, body shame, $\alpha = .75$ and control beliefs, $\alpha = .72$ (McKinley & Hyde, 1996). The OBC is a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree); higher scores indicate higher levels of body surveillance, body shame and control beliefs.

Media Influence/Sociocultural Scales. The Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3) is a 30-item measure that examines women's awareness and internalization of the societally sanctioned ideal (Thompson, van den Berg, Roehrig, Guarda & Heinberg, 2004). The subscales include: internalization (general, athlete), pressure, and information. The SATAQ-3 subscales have good convergent validity with measures of body image (Thompson, van den Berg, Roehrig, Guarda & Heinberg, 2004). The SATAQ-3 is a 5-point Likert scale (1 = definitely disagree, 5 = definitely agree). Higher scores indicate higher levels of internalization and pressure.

The Perceived Sociocultural Pressure Scale (PSPS) was developed to assess perceived pressure from peers, family, and the media to lose weight and have a thin body (Stice, 2006). The internal consistency for this measure is $\alpha = .88$, and the test-retest reliability is $r = .93$ (Stice, 2006). The PSPS is a 5-point Likert scale (1 = none, 5 = a lot), with higher scores indicating higher levels of perceived pressure.

Demographics. A series of demographic questions were incorporated into the initial assessment battery. The demographic questions were included to measure specific subject characteristics (age, race/ethnicity, and year in school). Additionally, participants were asked to estimate the amount of time they watch TV and how often they read fashion-related magazines. These questions were used to describe the sample, ensuring that the assumption of its representative nature had been met. Additionally, this information was used to rule out any differences between groups on demographic

variables, ensuring that the results of the study can be attributed to the manipulations and not to group differences.

Manipulation Check. To determine whether participants could be impacted by the presented materials, a manipulation check was done. This was included in the brief-assessment battery and in the final assessment battery. Participants were asked to describe what they saw in the PowerPoint presentation and in the video conditions. These questions were included to ensure the each participant attended to the stimuli.

Procedures

The experiment involved a pre-test and two post-test phases. Participants completed all of the standardized assessments of body image and socio-cultural influence scales pre- and post-manipulation. The brief post-test assessment packet, issued after viewing the image ideal presentation, consisted of the PASTAS, BISS, SATAQ-3, and a manipulation check.

On arrival to the experiment, participants were told by a female experimenter that they would be participating in a study that examined the media's influence on mood. Participants were told that they would fill out a series of packets, as well as view a PowerPoint presentation and a video presentation. After receiving the description of the study and signing the consent forms, each participant received a packet of information and were instructed not to look ahead in the packet, pulling out only the forms they were instructed to at designated times.

Participants were instructed to complete step one, which contained the demographic questionnaire and the pre-assessment battery. Next, participants were

informed that they would be viewing a 3.5-minute PowerPoint presentation. Once the PowerPoint presentation was viewed, the participants were instructed to complete step two, containing the brief-assessment battery and the PowerPoint manipulation check. Once all the participants completed the packet, they began the second part of the experiment, which involved either viewing the intervention video or control video. At the termination of the video, the participants were instructed to complete step three, which contained the final set of measures and the final manipulation check. Once the last participant completed the assessment measures, participants were debriefed and excused.

Results

Participant Characteristics

Participant characteristics for each treatment condition can be found in Tables 1 and 2. Prior to testing the experimental hypotheses, independent sample t-tests and chi-square analyses were conducted to rule out differences between groups on demographic variables. There were no significant differences between groups on age, average hours of television watched per week, year in school or ethnicity ($p > .05$ for all).

Analyses were also conducted to ensure that there were no significant differences between groups on base-line body image scores. An independent t-test conducted on all base-line measures revealed there were no significant differences between groups on any of the measures ($p > .05$ for all).

Table 1

Means and Standard Deviations for Age and Average Hours of Television Watched Per Week

	Control			Experimental			<i>F</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	
Age	39	19.44	2.60	39	18.82	1.07	3.08
Average Hours of TV	39	12.35	9.00	39	9.98	10.28	.026

Table 2

Crosstabs and Chi-Square Analyses for Year in School and Ethnicity

	Condition		χ^2
	Control	Experimental	
Year in School			7.60
Freshman	23	30	
Sophomore	10	2	
Junior	3	4	
Senior	2	3	
Other	1	0	
Total N	39	39	
Ethnicity			6.97
Asian	14	15	
Black or African American	5	2	
Spanish, Hispanic or Latino	4	12	
Native Hawaiian or Pacific Islander	3	2	
Mexican American	8	4	
Missing	5	4	
Total N	39	39	

Test of Hypothesis

Comparison 1: Pre-Test Body-Image Scores versus Brief Post-Test Body-Image Scores. Comparison 1 addressed the hypothesis that participants' body image scores would decrease after exposure to slides of the image ideal, demonstrating the negative effect the media has on body image. This comparison also examined the features of body image that are state-like, identifying the variants of body image that are changeable.

A paired samples t-test was conducted on both groups combined ($N = 78$), as participants in both groups were exposed to the same set of experimental procedures on this leg of the experiment. Results can be found in Tables 3.

Analysis indicated a significant difference between the level of General internalization of the media's influences, with women having higher levels of internalization post-image ideal, on the Socio-cultural Attitudes Towards Appearance Questionnaire, $t(77) = -2.36, p = .02$. Results neared statistical significance on the Body Image States Scale, $t(77) = 1.93, p = .058$, indicating that women had more negative body image states post-image ideal. Analysis indicated a significant difference on the Physical Appearance State and Trait Anxiety- State Scale, $t(77) = 2.48, p = .02$, indicating that women felt less anxious, tense, or nervous about their physical appearance post-image ideal.

To assess the size of the effects, a Cohen's d was calculated for each questionnaire. Cohen (1988) suggests that a d value of .2 is a small effect, .5 is a medium effect, and .8 is a large effect. For these comparisons $d < .5$ for all.

Table 3

Means and Standard Deviations on Body-Image Scores Pre and Brief Post Media Image Ideal Exposure

	N	Pre		Brief Post		<i>t</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
SATAQ- Internalization General	78	2.94	1.01	3.07	.98	-2.35*
SATAQ-Internalization Athlete	78	2.98	.98	3.05	1.03	-1.31
SATAQ-Pressures	78	2.91	1.14	3.03	1.28	-1.29
SATAQ-Information	78	3.20	1.03	3.35	.97	-1.44
PAS-State	78	1.03	.70	.94	.76	2.48*
PAS-Trait	76	1.98	.63	1.96	.67	.72
BISS	78	5.09	1.48	4.90	1.67	1.92

Note. * $p < .05$

Comparison 2: Post-Intervention versus Post-No Intervention. Comparison 2 addresses the hypothesis that participants who received the intervention would report a more positive body image than participants exposed to the control condition.

To ensure that there were no significant differences between groups on the brief post-body image measures, an independent t-test comparison was conducted between groups. The results indicated that there were no significant differences between groups on any of the brief post measures ($p > .05$ for all). Results can be found in Table 4.

To test the impact of the psycho-educational intervention, an independent t-test was conducted between groups post-intervention versus post no-intervention control. Results indicated that there were no significant differences between groups on any of the post-test measures ($p > .05$ for all). Results can be found in Table 5.

To assess the size of the effects, a Cohen's d was calculated for each questionnaire. For these comparisons $d < .5$ for all.

Table 4

Means and Standard Deviations on Body-Image Scores Brief Post Media Image Ideal Exposure

		Brief Post			
		<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>
SATAQ-Internalization General	Control	39	3.10	1.02	0.23
	Experimental	39	3.05	.94	
SATAQ-Internalization Athlete	Control	39	3.27	1.04	1.87
	Experimental	39	2.84	.99	
SATAQ-Internalization Pressures	Control	39	3.11	1.48	.55
	Experimental	39	2.95	1.05	
SATAQ- Information	Control	39	3.53	.85	1.68
	Experimental	39	3.17	1.05	
PAS-State	Control	38	1.02	.76	.92
	Experimental	38	.86	.75	
PAS-Trait	Control	39	2.03	.65	.91
	Experimental	39	1.89	.69	
BISS	Control	39	4.77	1.63	-.71
	Experimental	39	5.04	1.71	

Note. * $p < .05$

Table 5

Means and Standard Deviations on Body-Image Scores Post Media Image Ideal Exposure

		<i>n</i>	Post		<i>t</i>
			<i>M</i>	<i>SD</i>	
SATAQ-Internalization General	Control	39	3.01	1.06	.25
	Experimental	39	2.95	1.02	
SATAQ-Internalization Athlete	Control	39	3.17	1.03	1.57
	Experimental	39	2.81	1.04	
SATAQ-Internalization Pressures	Control	39	2.79	1.19	-.39
	Experimental	39	2.90	1.15	
SATAQ- Information	Control	39	3.38	0.88	1.07
	Experimental	39	3.14	1.07	
PAS-State	Control	39	.93	.74	.39
	Experimental	38	.86	.75	
PAS-Trait	Control	39	1.98	.67	.75
	Experimental	38	1.86	.66	
BISS	Control	39	5.33	1.44	-.23
	Experimental	38	5.41	1.63	
BIQ	Control	39	1.72	1.42	1.01
	Experimental	39	1.40	1.39	
MBSRQ-AS Appearance Evaluation	Control	39	3.39	.93	.12
	Experimental	39	3.37	.67	
MBSRQ-AS Appearance Orientation	Control	39	3.37	.53	.76
	Experimental	39	3.27	.62	

MBSRQ-AS Body Areas Satisfaction	Control	39	3.40	.61	-.35
	Experimental	39	3.46	.69	
MBSRQ-AS Overweight Preoccupation	Control	39	2.39	1.02	.17
	Experimental	39	2.35	.94	
MBSRQ-AS Self-Classified Weight	Control	39	3.23	.63	-.25
	Experimental	39	3.27	.75	
PSPS	Control	39	2.08	.86	-1.00
	Experimental	39	2.29	.96	
OBCS Body Surveillance	Control	39	4.35	1.01	.45
	Experimental	39	4.23	.19	
OBCS Body Shame	Control	37	3.18	1.28	.10
	Experimental	36	3.15	1.27	
OBCS Control Beliefs	Control	39	4.83	.96	1.83
	Experimental	38	4.42	1.00	

Note. $p < .05$

Discussion

The purpose of this study was to examine the state and trait-like properties of female body image, that is, to determine the extent to which the psychological aspects of body image are alterable or fixed. In addition, this study attempted to evaluate the impact of a psycho-educational intervention on female body image.

The results of the experiment suggest that exposure to the media ideal does influence body image; however, there is mixed evidence related to the direction of this influence. While women experienced increased levels of awareness and internalization of the societally sanctioned ideal, and while there was a trend towards decreased body image states, women felt less anxious, tense or nervous about their physical appearance post- image ideal. Specifically, exposure to the media ideal images in comparison to exposure to home and garden images resulted in greater awareness and internalization of the societal ideal with a trend towards worse body image states. Contradicting these results, exposure to the media ideal resulted in lower levels of anxious, tense, and nervous feelings.

Contrary to expectation, there were no significant differences between the no-intervention and intervention groups on body image variables or socio-cultural attitudes towards appearance. Overall, it appears the intervention condition had no impact.

Although the results indicated a significant influence of the media ideal, there is a question as to the meaningfulness of the differences observed. The differences between the means on these measures are comparatively small, indicating that the significant differences may be clinically negligible.

The results on the remaining questionnaires examining the media ideal and the results of the intervention may be due to a lack of power given the small effect sizes. Methodological issues corresponding to the PowerPoint display and the psycho-educational intervention may have contributed to the effect sizes.

Limitation of the Current Investigation

The outcome of this study may be due to the lack of statistical power in the given manipulations. The media ideal presentation may have grossly over-emphasized the media imagery. Had the ideal images been embedded in other non-body image related slides, a larger effect size may have been observed. Additionally, the medial ideal presentation may not have been strong enough to evoke feelings of anxiety or body image concern in the sample population as a whole. Related, the presentation may not have captured the mechanisms by which the media influences body image, rendering it a less impactful manipulation.

A final limitation of the image ideal presentation was the method of selection. The ideal image presentation was not piloted using a group of peers. Future research should pilot the image ideal presentation, having a group of peers' rate the images according to their perception of how the models reflect the societal ideal.

Although the presentation may not have been strong enough to evoke change on standardized scales, anecdotally one can see the negative effect through the following quotes from participants on the manipulation check post image ideal: "I knew every picture was advertising something but that wasn't what I was looking at. I couldn't help but look at the models abdomen, breasts, and waists;" "I saw many women with "perfect"

bodies. Seeing this made me feel worse about myself than I already do...Everyday we see images of 'perfect' people, which these women were. They were also very fashionable" and "Very thin girls, they had a [sic] very nice body. Some were very thin [sic], they had the perfect face, skin, body, legs." Of the sample, 44% of the women reported the effect of the media and had something positive to say about the images displayed.

The video presented as the psycho-educational intervention was brief (35-minutes). Due to years of prior media exposure, it is practical to question whether this brief intervention is of sufficient length to counteract the negative effects of prior media exposure (Irving & Berel, 2001). The societal influence may be so ingrained, rendering brief intervention strategies as ineffective tools for reducing body image concerns. It may be possible that if the video had been longer and more intensive, positive changes would have been observed (Irving & Berel, 2001).

Another potential problem with the current study is related to the dynamics of body image and the etiology of body image-related disorders. Although this experiment was attempting to identify the state-like properties of body image in the population as a whole, it may be a more effective strategy to first identify individuals who are influenced by the media, examine what properties of body image present themselves as state-like in this population, and design interventions/prevention strategies accordingly. This may be an effective strategy to examine across all the potential contributors of body image, creating interventions that are tailored to variables that influence a given individual's body image concerns.

There are several other limitations that deserve consideration. One concern is the length of the experiment and the assessment battery. Given the three assessment packets, each containing multiple questionnaires, participants may not have answered the questionnaires towards the end of the experiment as precisely as they answered the questionnaires at the beginning of the experiment. A related concern was the use of the same questionnaires pre-, brief post- and post-test. Participants may have had a general recall for answers provided from one assessment battery to the other, limiting the impact of the stimuli.

Finally, the current investigation focused primarily on media, one of several sociocultural determinants of negative body image (Irving & Berel, 2001). Body image is comprised of a number of components, with a number of different influences (Thompson et al., 1999). The measures included in this experiment were used to assess the various sub-components of body image; however, the media may not be an appropriate influence for the components of body image being measured in these scales.

Future Directions

Future research should continue to explore the variants of body image that may be changeable for example body image satisfaction levels. Identifying the features of body image that are more state-like may be key for creating effective interventions and preventions, reducing the pervasiveness of dieting and body image related disorders. The evaluation of the state-like properties of body image may differ, depending on the etiology of a disorder or due to individual differences. Future research should be expanded to investigate a variety of factors that influence body image (e.g., media, peers,

and parents) as well as examining individual differences (e.g., physical attributes, ethnicity, sexual orientation, gender, and age).

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Appendix A

Signed Approval Forms

Office of the Academic
Vice President
Academic Vice President
Graduate Studies and Research
1009 Villa Maria Court
San Jose, CA 95125
(408) 924-2480
www.sjsu.edu

To: Aline Kirby
1009 Villa Maria Court
San Jose, CA 95125

From: Pam Stacks,
AVP, Graduate Studies & Research

Date: June 22, 2005

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Manipulation of the psychological state and trait properties of female body image."

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Pam Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subjects portion of your project is in effect for one year, and data collection beyond June 22, 2006 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

Cc: Glenn M. Callaghan, Ph.D.

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To: Aline Kirby
4545 Moorpark Ave #3
San Jose, CA 95129

From: Pamela Stacks, Ph.D.
Associate Vice President
Graduate Studies and Research

Date: May 19, 2006

The Human Subjects-Institutional Review Board has approved your request for an extension to the use of human subjects in the study entitled:

"Manipulation of Psychological State and Trait Properties of Body Image"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Pamela Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subject's portion of your project is in effect for one year, and data collection beyond May 19, 2007 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

cc: Dr. Glenn Callaghan - 0120

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To: Aline Kirby
4545 Moorpark Ave #3
San Jose, CA 95129

From: Pamela Stacks, Ph.D.
Associate Vice President
Graduate Studies and Research

Date: April 20, 2007

The Human Subjects-Institutional Review Board has approved your request for an extension to the use of human subjects in the study entitled:

"Manipulation of Psychological State and Trait Properties of Body Image"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Pamela Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subject's portion of your project is in effect for one year, and data collection beyond April 20, 2008 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

CC: Aline.Kirby@sjstate.edu

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Appendix B

Agreement to Participate in Research

Responsible Investigator(s): Aline Kirby, Graduate Student; Glenn Callaghan, Ph.D

Title of Protocol: Manipulation of Psychological State and Trait Properties of Body Image

I have been asked to participate in a research project investigating feelings in response to media presentations.

I understand that I will be asked to view a brief power point presentation depicting female images taken from popular magazines, in addition to viewing a video presentation. I understand that I will be asked to fill out and complete several questionnaires related to my mood and body image.

I understand that this research project involves no foreseeable risks or discomforts to me beyond those that might ordinarily be encountered in daily life.

There are no known benefits associated with my participation in this research project.

I understand that in this research project my participation will be anonymous, and that my name will not be linked to any data. The results of this study may be published or presented, but no information that could identify me will be included in these publications or presentations.

I understand that I may participate in psychological research voluntarily or as part of my course work in a university course. If I participate in this research in exchange for course extra credit, I will receive 1 unit of credit for each hour of my participation in this research project. Voluntary participation in psychological research will not be compensated.

I understand that participation in this research project is not required and that if I am seeking to satisfy a component of a course there are alternative methods aside from participating in this research project. In addition, I understand given that participation in this research project is voluntary, and that after this research project has begun, I may refuse to participate further without penalty or prejudice from San Jose State University.

Questions about this research of study can be answered by contacting Glenn M. Callaghan, Ph.D. at the Department of Psychology San Jose State University. His telephone number is (408) 924-5610. Complaints about the research may be presented to Dr. Sheila Bienefeld, (408) 924-5600. Questions about research subjects' rights or research related injury may be presented to the Associate Vice President for Graduate Studies at (408) 924-2480.

By signing below, I agree to participate in this study and have received a copy of this consent form.

Participant's Signature

Date

By signing below, I agree to include the above named participant in the research and I attest that the participant has been fully informed of his or her rights as a participant.

Investigator's Signature

Date

Appendix C

Demographics

1. Age in Years:

2. Year in School:

☐ Freshman	☐ Senior
☐ Sophomore	☐ Graduate Student
☐ Junior	☐ Other _____

3. What is your race/ethnicity? (mark all that apply)

☐ American Indian or Alaska Native	☐ Spanish, Hispanic, or Latino
☐ Asian	☐ Native Hawaiian or Pacific Islander
☐ Black or African American	☐ White

4. Please list any television programs that you view on a daily basis.

5. Please list any magazine you subscribe to or purchase.

6. How many hours per week do you spend watching TV and/or reading magazines?

Appendix D

Manipulation Checks

1. Briefly state what you saw when you viewed the image presentation.

1. Briefly state what you saw when you viewed the video.