Spring 2016

Fluctuations In Body Dissatisfaction Across Social Comparison Situations

Stephanie Jian Chen

FLUCTUATIONS IN BODY DISSATISFACTION ACROSS SOCIAL

COMPARISON SITUATIONS

A Masters Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Psychology

By

Stephanie J. Chen

May 2016

FLUCTUATIONS IN BODY DISSATISFACTION ACROSS SOCIAL COMPARISON SITUATIONS

Psychology

Missouri State University, May 2016

Master of Science

Stephanie J. Chen

ABSTRACT

Body image has been seen traditionally as a stable trait or dispositional construct. However, recent researchers has increasingly recognized a more dynamic aspect of it—one which is likely impacted by various situational factors. One such situational factor is the process of social comparison. As a method of social comparison, clothing size manipulations (such as trying on different sizes of pants) have been shown to affect fluctuations in female participants' body image. Research has also highlighted the detrimental effects of certain visual cues, such as viewing images of slender female figures, on body image. However, there is a lack of research that investigates the impact of these various methods of social comparison. Therefore, the aim of this study was to further the research of clothing size manipulations utilizing a vignette-based methodology while additionally exploring the effects of a visually-cued social comparison in a 3 ("too loose", "expected fit", and "too tight" pants) X 2 ("low BMI" vs. "high BMI" visual) between-subjects design. Manipulation checks were also employed in order to evaluate the participants' memory recall and perceived potency of the vignette. Results showed evidence for a main effect of the pant-size manipulation but neither the visual cue manipulation nor the interaction term were significant. Additionally, the effects of state and trait body dissatisfaction were explored and contrasted. Overall, the findings from this study may be valuable to clinicians looking to structure interventions to improve body image in their clients.

KEYWORDS: body image, clothing size, validity checks, vignettes, state and trait body dissatisfaction

This abstract is approved as to form and content

_____
D. Wayne Mitchell, Ph.D.
Chairperson, Advisory Committee
Missouri State University

FLUCTUATIONS IN BODY DISSATISFACTION ACROSS SOCIAL

COMPARISON SITUATIONS

By

Stephanie Chen

A Masters Thesis
Submitted to the Graduate College
Of Missouri State University
In Partial Fulfillment of the Requirements
For the Degree of Master of Science, Psychology

May 2016

Approved:

_____

D. Wayne Mitchell, Ph.D.

_____

Timothy K. Daugherty, Ph.D.

_____

Danae L. Hudson, Ph.D.

_____

Julie Masterson, Ph.D., Dean, Graduate College

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Literature Background

Body image, or one's feelings about the aesthetics or attractiveness of one's own body, was first defined by the neurologist and psychoanalyst Paul Schilder (1935). Also synonymous with terms such as "body concept" and "body scheme", this concept is important to understand in relation to adjustment to body disablement (i.e. physical disabilities), posture and spatial orientation, personality development, and cultural influences. Being a student of the renowned psychoanalyst, Sigmund Freud, Schilder emphasized that an individual's concept of his or her body is not represented necessarily by a conscious image but by a collection of attitudes, feelings, and fantasies. In his research, he focused on clinical populations with brain abnormalities such as individuals with schizophrenia, and reported distortions such as a sense of alienation from the body (depersonalization), an inability to distinguish boundaries of the body, and feelings of a transformation of sex in the body (Schilder, 1935). More recently, the area of body image research has turned toward excessively negative perceptions of body image, such as those that can lead to eating disorders. The construct of body image consists of a number of different dimensions including body dissatisfaction and social comparison.

Body Dissatisfaction. Body dissatisfaction is defined as the negative associations with perceived body weight, shape, or image (Cash, Fleming, Alindrogan, Steadman, & Whitehead, 2002). It is often a motivating factor behind weight-loss efforts or intense exercise regimens. This condition is prevalent in both genders but especially in women, with 33-45% of males and 80-90% of females estimated to be dissatisfied with their

1

bodies (Reel, 2012). Women are also more likely to be uncomfortable with their weight and have higher anxiety about how their bodies are perceived by others. The current literature provides evidence of associations between body dissatisfaction and social anxiety, lower self-confidence or self-esteem, and depression (Russell & Cox, 2003; Grilo & Masheb, 2005; Barker & Galambos, 2007).

Development of Body Dissatisfaction. The development of negative body image can arise from both historical and proximal events such as past childhood teasing due to one's weight and the present inability to fit into a pair of jeans, respectively. Research has demonstrated that there are many spheres of influence as an individual is developing his/her body image, including culture, media, peers and family, and self-esteem. Different cultures have valued varying traits across time for women (e.g. cheekbones, foot size, makeup and fashion styles, skin and teeth color, fat distribution) although currently, the ideal body is slim (Reel, 2012). For men in Western cultures, the ideal body has simultaneously grown thinner and more muscular, as measured by the evolution of the proportions of G.I. Joe action figures (Pope, Olivardia, Gruber, & Borowiecki, 1999). These cultural ideals are often perpetuated through popular media such as television shows, movies, magazines, and the fashion industry.

A meta-analysis found that female participants' body image was significantly more negative after viewing pictures of thin celebrities (Groesz, Levine, & Murnen, 2002). Given that the average American spends more than 10 hours in media consumption per day, this could be a significant concern for modern society (Newsom, 2011). Another important source of information stems from an individual's social network, such as friends and family. A person's family is likely to represent his/her first

encounter with perceptions of body image (Gleeson & Frith, 2006). People tend to

compare themselves to others within their own social groups, also called "social

comparison", which can influence body dissatisfaction depending on whether someone

perceives his/her body as being better or worse than others'. Finally, self-esteem refers to

the way individuals perceive their overall worth, and can be related to body image,

depending on the amount of importance an individual places on the area of physical

attractiveness and body shape. Self-esteem can also act as a buffering agent against

negative body image. Evidence has found that individuals with higher self-esteem are

more likely to have less body dissatisfaction, regardless of actual weight, shape, or size

(Reel, 2012). Though some researchers focused on body image as a cross-situational and

stable trait (Cash, 1990; Tiggemann, 2001), this concept has also been shown to be fluid,

often changing within a single day in response to such events (Reel, 2012).

    <u>Trait vs. State Body Dissatisfaction</u>. Traditionally, the dominant paradigm in body

image research has been predicated on the assumption that body dissatisfaction is a stable

construct, not likely to be influenced by situational factors (Fox, 1997). However, other

researchers have conceptualized overall body image to be a dynamic state that can be

affected by one's immediate surroundings (Cash, Cash, & Butters, 1983; Vocks, Hechler,

Rohrig, & Legenbauer, 2009). For example, Sankowsky (1981) found that a female's

body satisfaction can fluctuate radically depending on how attractive she feels in

comparison to other women in her vicinity. Since Sankowsky's (1981) paper, several

studies have found body dissatisfaction to be impacted by such situational factors through

utilizing vignettes of hypothetical scenarios. Haimovitz, Lansky, and O'reilly (1993) first

investigated the stability of body image in response to several situations administered

through guided imagery, varying with respect to the salience of one's own body and the presence of attractive others in the surroundings. Body satisfaction was found to vary significantly across situations with respect to different parts of the body. Tiggemann (2001) examined the same scenarios according to Haimovitz et al.'s (1993) protocol and observed interactions between personal factors—such as BMI (body mass index) and tendency for social comparison—and situational factors. Finally, Tiggemann and Andrew (2012) extended this line of research, demonstrating that type of clothing worn (e.g. swimsuits vs. sweaters) had significant situational impacts on body dissatisfaction in females. Still, researchers in the body image field are somewhat undecided on whether to treat body dissatisfaction as a stable or unstable trait. More likely, it is a complex concept that incorporates multiple dimensions, some of which may be greater influenced by situational factors such as social comparison.

Social Comparison. Social comparison, with respect to body image, refers to the cognitive likening of one's own body to those of peers or others, such as celebrities or models portrayed in the media. This concept is related strongly to an individual's internalization of the "thin ideal", or the extent to which someone believes in socially-defined ideals of attractiveness and engages in behaviors designed to bring them about (Thompson, Heinberg, Altabe, & Tentleff-Dunn, 1999). In general, the more an individual adopts the ideals of society at the time, the greater the efforts are to match or embody them, and the greater the disappointment if the efforts prove unsuccessful.

Cultural Ideals over Time. The concepts of beauty and attractiveness have not remained static, and as such, the stipulations of the ideal female body are in continuous

4

fluctuation (i.e. bust, waist, and hip measurements). When tracing the cultural variations in body image, researchers have revealed a great deal of change through time.

Historically, plumpness was considered fashionable and erotic (Grogan, 2008). From the Middle Ages, the female body was often reproduced in works of art as fleshy and with full, rounded stomachs, as a symbol of wealth and fertility (Fallon, 1990). In fact, slender figures were not thought to be attractive until the 20th century. Various authors have attributed the idealization of slimness to the development of the fashion industry in the 1920s, when clothes started being photographed on real-life models instead of being hand-drawn. Also at that time, the origins of the "flapper" trend were based in the cultural and political turbulence of the Prohibition, post-World War I society, and the global export of American jazz music. Flapper fashion demanded that women become "boy-like" figures with flat chests and narrow hips in order to best show off the straight, low-waisted dresses to advantage (Grogan, 2008). It was then that women started binding breasts and using vigorous diets and exercises to attain this shape.

In the 1930s to 40s, ideals moved towards more shapely, "hourglass" figures, with Marilyn Monroe personifying the trend, having large breasts and hips, a tiny waist, and slim legs. Later, the 50s brought an aura of sophistication in place of sensuality, with once-again slim stars such as Audrey Hepburn and Grace Kelly (Mazur, 1986). This trend of the thin ideal continued and became even more acute in the late 1990s with the rise of "heroin chic", where extremely thin models were encouraged by the fashion industry to ingest appetite suppressants (Frankel, 1998). The thinness trend has influenced the rise and interest of body image research and it has also continued to the current day, with the "thin ideal" growing ever more demanding as clothing trends

become more revealing. From this complex history, one can see the difficulties presented to women in their efforts to emulate the cultural trends over time. Conceivably, individuals with a deep internalization of the societal ideal would be hard-pressed to gain and lose weight as each decade's media perpetuated a new arbitrarily "ideal body".

Visual Cues in Media. Research has highlighted the relative vulnerability of individuals with high thin-ideal internalization to media exposure. Currently, the ideal body for females is thought to be a toned yet feminine physique, with a small waist and little body fat. An example of recent popular trends in social media is the *thigh gap*, a space between the inner thighs of women, as observed when standing upright with their feet together (Salter, 2013). Salter (2013) also emphasized that this trend is virtually impossible to achieve, excluding some exceptionally thin fashion models. In the United States, many women now consider an inner thigh gap to be an attractive and coveted feature, as a result of the popularization on social media such as Facebook or Twitter. Trends such as this rely heavily on the incessant distribution of visual cues (images) to media consumers, which increases mood and body image disturbances (Cattarin, Thompson, Thomas, & Williams, 2000; Heinberg & Thompson, 1995). Tiggemann and Slater (2004) gathered empirical evidence that viewing music videos featuring thin, attractive women led to increased social comparison and body dissatisfaction. Additionally, according to Bair, Kelly, Serdar, and Mazzeo (2012), consumption of appearance-oriented Internet media was associated with greater eating disorder-related pathology. Furthermore, Cusumano and Thompson (1997) incorporated visual images of virtual female figures (i.e. drawings and cartoons) when evaluating impact of media exposure on body image. A more recent experiment revealed that watching Disney

cartoons with attractive female characters influenced body dissatisfaction in girls as young as 5 years old (Asawarachan, 2013). Overall, there is evidence that external visual cues, such as media images of fashionable celebrities and models, can influence the motivation of young women to pursue elusive and dangerous weight-loss goals. It is also evident that, both historically and currently, there often exists a relationship between thinness and fashion, with different clothing and style trends being closely related to body ideals and body image.

Utilizing Clothing in Comparisons. Once an individual has incorporated the thin ideal into his/her personal values and beliefs, social comparisons can be made even while alone, through behaviors such as body checking. Body checking is a behavioral expression of body evaluation and can be classified either as using concrete cues (e.g. weighing oneself on the scales or using a tape measure) or ambiguous cues (e.g. checking the mirror to gauge weight loss or asking friends for social feedback; Shafran, Fairburn, Robinson, & Lask, 2004). According to Shafran, Lee, Payne, and Fairburn (2007), this behavior can be problematic in general as it often results in obtaining negative feedback about the societal acceptability of one's body. Additionally, research has shown that women with body concerns tend to ascribe negative meanings to ambiguous cues, indicating that negative feedback is even more likely to be obtained when using ambiguous or unreliable body checking methods (Jackman, Williamson, Netemeyer, & Anderson, 1995).

Clothing size and fit are examples of ambiguous body checking tools in order to facilitate social comparisons in the absence of other people. Research has found evidence that women especially want to feel thin, and buying a smaller size than expected helps to

facilitate this feeling (Campbell & Chase, 2004). To achieve fit in a certain garment size is often both an indicator for current weight loss and a goal for future weight loss. In order to capitalize on this phenomenon, the minds behind the fashion industry have conceived the idea of "vanity sizing", in which clothes sold in retail stores have their sizes marked down. For example, a size 6 dress could become a size 4, or size 12 pants could become size 8. In this way, a woman who previously wore size 8 clothing would now need to look for smaller-sized garments to achieve the same fit. Over time, this has created an unstable sizing continuum. Researchers found that pairs of size 4 pants could vary as much as several inches in the waist length (Kinley, 2003). Women often indicate that they want a smaller size number (e.g. a size 2), but how much does it actually affect their self-perceptions and attitudes? Previous research highlights the use of a clothing size manipulation in relation to other variables such as self-related mental imagery, self-esteem, and body image.

Research on Clothing Size Manipulations. In previous clothing size manipulations, fitted garments made for the lower body—such as pants—are more often used than garments for the upper body which may be constructed to allow some variation in body size (Kinley, 2010). Aydinoğlu and Krishna (2010) studied the effect of a clothing size manipulation in which participants were tasked with imagining successfully fitting into jeans which were "one size smaller", "the same as", or "one size higher" than their usual size. Other variables they investigated in their study included self-reported measures of appearance self-esteem, attitude toward the product (positive vs. negative), and positive self-related mental imagery (i.e. "*I pictured myself thinner*"). The researchers found evidence for a mediation of the "one size smaller" condition (aka

vanity sizing) predicting positive attitudes toward the product through the pathway of positive self-related mental imagery, while being moderated by appearance self-esteem. In effect, the vanity sizing condition enhanced positive mental imagery, notwithstanding self-esteem level. However, the positive imagery only increased attitude toward the product for those with low self-esteem, indicating that there was an indirect effect of vanity sizing on attitude through imagery which was moderated by self-esteem. No differences were found between "the same as" and "one size higher" conditions. As self-related mental imagery was significantly predicted by clothing size condition and the "one size smaller" condition resulted in improved self-imagery compared to both other conditions, it supports the theory that women feel better about themselves after fitting into smaller sized clothing. The overall conclusion was that "vanity sizing works" by increasing some consumers' positive attitudes toward the product.

Kinley (2010) studied a similar manipulation in which participants actually tried on pants until they achieved fit. Data were collected in two phases. The first ascertained a baseline measure for self-esteem and body image, demographics, and their usual pant size. The second phase took place one to four weeks afterwards and participants were asked to try on pants which were from a brand expected to either "run large" or "run small". If acceptable fit was not achieved on the first attempt (usual clothing size), additional sizes were brought in until fit was attained, simulating the actual shopping experience. If fit was achieved on the first try, the individual was placed in the "expected size" group. Participants then filled out additional self-esteem and body image questionnaires. Self-esteem significantly increased from baseline ratings for those in the "ran large" and "expected size" groups. There were no differences in self-esteem among

the "ran small" group. For body image, participants who achieved fit in a smaller size or expected size indicated less weight preoccupation compared to baseline. Those who required larger sizes to achieve fit exhibited decreased appearance orientation, implying that they devalued physical appearance after the manipulation. Overall, the final size of the pants did make a difference in how participants felt about themselves and their bodies.

Patel (2005) conducted two parallel studies to ascertain: 1) whether or not women's pant sizes were indeed inconsistent and 2) the impact of a clothing size manipulation on self-esteem, body image, and mood. Results from the first study indicated that waist and thigh measurements varied up to more than 3 inches for pairs of pants purchased from different stores in the same size. In the second study, participants were assigned randomly to try on pants that were one size smaller, the same size, or one size larger than their usual size. Analyses implied that the act of trying on pants, regardless of condition, resulted in higher levels of body dissatisfaction and lower levels of appearance-related self-esteem. A follow-up to Patel's (2005) study was conducted by Schafer (2008). It was determined that the previous manipulation used was not powerful enough to detect significant fluctuations in body image. Therefore, Schafer (2008) randomly assigned her participants to try on pants that were *two* sizes smaller, the same size, or *two* sizes larger. When data were analyzed, results indicated that participants who tried on pants that were two sizes smaller than expected endorsed significantly more negative body image and self-esteem when compared to the other two groups.

Purpose of the Study

A search through the previous literature revealed some mixed results, but overall, achieving fit in smaller clothing sizes produced improvements in positive self-imagery, self-esteem, and body image. On the other hand, trying on pants that were expected to fit, but fit too tightly, resulted in lower body satisfaction and appearance-related self-esteem. Additionally, previous research has shown that external visual cues influence participants' body image. While both factors appear to be important in understanding body image, studies have only separately measured the influence of visual cues (images) and clothing size on body image. The purpose of this study was to simultaneously examine the presence of visual cues and a clothing size manipulation to determine their influence on negative body image.

Hypotheses

This vignette study used a pant size manipulation with three levels ("too tight, "expected fit", and" "too loose") and a visual cue of a hypothetical "fitting room attendant" with two levels ("low BMI", "high BMI") to investigate fluctuations in participants' body image.

1) First, it was hypothesized that the imagined pant tightness level would result in group differences among body dissatisfaction, mood, self- and body esteem, and future health behaviors. Specifically, it was predicted that participants who imagined trying on tighter pants would report higher levels of body dissatisfaction and negative affect, less self-esteem and body esteem, and greater intention to engage in weight-loss focused health behaviors afterwards (i.e. their resolve to diet or exercise regularly in the future).

2) Second, it was predicted that the fitting room attendant level would also have a main effect on these variables. Specifically, it was hypothesized that participants who were exposed to the visual cue of a hypothetical fitting room attendant with lower BMI would report higher levels of body dissatisfaction and negative affect,

lower self- and body esteem, and greater intention to engage in weight-loss focused health behaviors.

3) Third, the main effects were expected to be qualified by an interaction, such that as the fitting room attendants' BMI scores decreased, the body dissatisfaction reported by the participant would increase differentially according to pant size, with the "too tight" pants producing the most negative body dissatisfaction.

METHODS

Participants

Prior approval for this project was obtained from the Missouri State University

IRB (October 19th, 2015; approval# 16-0142). The original sample contained 394 female

students who were recruited from an online participant pool at Missouri State University.

During the data screening process, 15 participants were deleted due to missing data,

resulting in a final sample of 379. Participants ranged in age from 17 to 38 years, with a

mean age of 18.91 ($SD = 1.96$). The sample was 87.3% White ($n = 331$), 9.2% Black ($n = 31$), 3.7% Hispanic/Latino ($n = 14$), 1.3% Asian or Pacific Islander ($n = 5$), 0.8%

American Indian or Alaskan Native ($n = 3$), and 1.6% of another or mixed ethnicity ($n = 6$). Body Mass Index (BMI) for the current sample ranged from 15.96 to 39.06 with a

mean in the healthy weight category ($M = 24.05$, $SD = 4.36$). Table 1 provides a

summary for other demographic characteristics of the sample.

Procedure

Potential participants were told that the study was exploring consumer attitudes

toward clothing brand names and styles. After participants volunteered for the study

through the online Service Oriented Network Architecture (SONA), they were directed to

take part in an online survey through the Qualtrics website. They were then randomized

into one of six conditions and administered the vignette manipulation (See Table 2 for the

number of participants in each condition). After listening to the audio-recorded scenario,

participants were asked to answer a variety of self-report questionnaires. Upon

completing the study, they were provided with 1 research credit through the online

SONA system.

Table 1. Participant demographics.

Attribute	Variable	Percentage of Sample
Year in College	Freshman	75.9
	Sophomore	13.8
	Junior	7.4
	Senior	2.9
Relationship Status	Single	50.9
	In a relationship	43.3
	Other	5.8
Currently on diet	Yes	15.3
	No	84.2
Self-reported weight status	Underweight	5.0
	Healthy Weight	61.7
	Overweight	21.4
	Obese	11.9

Table 2. Participants by condition.

Pant Size Manipulation	Fitting Room Attendant Manipulation	N
"Too tight"	Low BMI	62
	High BMI	67
"Expected fit"	Low BMI	63
	High BMI	62
"Too loose"	Low BMI	61
	High BMI	64

Materials

  Experimental Manipulation. According to Tiggemann's (2001) guided imagery

protocol, participants were first asked to turn on their audio devices (with adjustable

volume) and they were then instructed to "Please take a minute to really imagine yourself

in the situation; imagine what you can see and what you are thinking and feeling".

Afterwards, they listened to an audio recording of a female voice reading one of the three

pant-size scenarios, while being presented with one of the two "fitting room attendant"

images (3.81 cm X 7.62 cm). The participants in each condition had a visual of their

hypothetical "dressing room attendant", pictured as a young woman with either low or

high BMI (see Figure 1). The scenarios and visuals were chosen to be clear, credible, and

similar enough to retain internal validity. The fitting room attendant images were chosen

for their ethnic ambiguity, simplicity, and similar presentation (i.e. outfit, hairstyle, pose,

expression). Additionally, the audio-recorded vignettes were constructed to be simple,

everyday scenarios that may often be experienced in the fitting rooms of retail clothing

stores.

Figure 1. "High BMI" and "Low BMI" conditions of the fitting room attendant
manipulation.

The three vignettes began with descriptions of the same scenario:

"Imagine that you are out shopping for a new pair of jeans. You visit a clothing store where you have made a couple of purchases before and were satisfied with the products. As you walk in, you can see that the display wall has jeans of all styles and washes. Then, you proceed to look through the various styles of jeans and make a decision on one".

Afterwards, the scenarios began to vary, based on the pant size condition that the participant was placed in: 1) the "too tight" condition,

"When you try on the size you usually wear, you find that the jeans are much too tight. You are unable to button the clasp and, looking at yourself in the dressing room mirror, you can see that the fabric is stretched taut across your legs. Surprised that your usual size doesn't seem to be working, you then ask the fitting room attendant (pictured below) to bring you another pair that is two sizes larger and these jeans turn out to be a good fit".

2) the "expected fit" condition,

"When you try on the size you usually wear, you find that the jeans fit perfectly. Looking at yourself in the dressing room mirror, you can see that the jeans flatter your figure and are just tight enough in the right places. You then ask the fitting room attendant (pictured below) to bring you the same pair of jeans in a different wash".

and 3) the "too loose" condition.

"When you try on the size you usually wear, you find that the jeans are much too loose. They are baggy in the waist and you realize that you would need a belt to keep them up. Looking at yourself in the dressing room mirror, you can see that the excess material is bunching up around your legs. Surprised that your usual size doesn't seem to be working, you then ask the fitting room attendant (pictured below) to bring you another pair that is two sizes smaller and these jeans turn out to be a good fit".

Measures. After listening to the audio recording, participants filled out a series of self-report questionnaires including a demographic survey (see Appendix H); a short measure of consumer satisfaction (in keeping with the advertised purpose of the study, participants were asked to rate their attitude toward the pair of pants that they imagined trying on and their willingness to purchase it; see Appendix A); and measures of body

dissatisfaction, mood, self-esteem, and various health behaviors; and manipulation checks (see Appendices for measures listed in the order of presentation).

Body Shape Questionnaire (BSQ). The BSQ is a measure of trait body dissatisfaction with 34 total items (Cooper, Taylor, Cooper, & Fairburn, 1987; see Appendix E). Participants are instructed to rate how often they have felt in certain ways about their body within the past month (i.e. "*Have you thought that your thighs, hips, or bottom are too large for the rest of you?*") on a scale with answers ranging from 1-(*never*) to 6-(*always*). Individual scores are then summed for a total score to obtain the measure of body dissatisfaction, with higher scores reflecting greater dissatisfaction (total range = 34 – 204). This measure has been shown to have high internal consistency (α = .97) and test-retest reliability (r = .88), as well as concurrent validity with other body image measures (r = .58 - .81) among adult populations (Rosen, Jones, Ramirez, & Waxman, 1996). It also had excellent internal consistency in the current sample (α = .97).

Body Image States Scale (BISS). The BISS is a measure of state body dissatisfaction, also used to assess body appraisals and emotions towards one's body (see Appendix B). The scale is composed of 6 items, each of which contain 9 statements ranging from extreme satisfaction to extreme dissatisfaction with one's body (i.e. "*Right now I feel extremely physically attractive.*"). Participants are instructed to choose the statement that corresponds to their feelings at the current moment, with lower total scores indicating more body dissatisfaction. The BISS has been shown to have acceptable internal consistency (α = .77 for women) although the test-retest reliability was evidenced to be less stable than other trait measures of body image, as expected (r = .69; Cash et al., 2002). Trait assessments are generally employed to measure characteristics that remain

stable over time, such as the BSQ. On the other hand, the BISS was designed to measure body image states in the context of specific situations and to be more sensitive to fluctuations. This measure evidenced acceptable internal consistency within the current sample ($\alpha = .89$).

Rosenberg Self-Esteem Scale (RSES). The RSES is a 10-item, widely-validated and utilized self-report measure of trait self-esteem (see Appendix D). Participants are asked to rate the degree to which they agree with statements pertaining to their self-perceptions (i.e. "*On the whole, I am satisfied with myself*") on a scale ranging from 1-(*strongly disagree*) to 4-(*strongly agree*). Individual scores are then summed for a total representing the measure of overall self-esteem, with higher scores reflecting greater global self-esteem. This measure has been shown to have acceptable internal consistency ($r = .77 - .88$) in samples of undergraduate college students (Rosenberg, 1965). It also had acceptable internal consistency in the current sample ($\alpha = .88$).

The Body Esteem Scale (BES). The BES is a 35-item measure of body esteem, an aspect of appearance-based self-esteem, also related to body dissatisfaction (see Appendix G). Instructions ask participants to rate each part or function of their body (i.e. "*body scent*", "*muscular strength*", "*buttocks*") on a scale from 1-(*have strong negative feelings*) to 5-(*have strong positive feelings*). Individual scores are then summed to obtain each subscale, with higher scores reflecting more positive body esteem on that dimension. This scale contains 3 subscales for use with female participants: weight concern, physical condition, and sexual attractiveness. For the purposes of the current study, the weight concern subscale, measuring items specific to weight gain and loss in females (i.e. "*appetite*", "*waist*", *etc.*), was extracted for analyses. Internal consistency

has been shown to be acceptable ($\alpha = .87$) within a sample of undergraduate college students (Franzoi & Shields, 1984). Within the current sample, the subscale of weight concern showed high internal consistency ($\alpha = .91$).

Positive and Negative Affect Schedule (PANAS). The PANAS is a 20-item measure of positive and negative mood states, with 10 items per each subscale (Watson, Clark, & Tellegen, 1988; see Appendix C). Items prompt participants to "rate to what extent you feel each emotion at the current time" ranging from 1-(*very slightly or not at all*) to 5 (*extremely*). Individual scores are then summed for a subscale total (total range = 10 – 50), with lower scores indicating less extreme affect. Watson, Clark, and Tellegen (1988) confirmed the scale had acceptable internal consistency ($\alpha = .84 - .90$) and test-retest reliability ($r = .68 - .71$). For the purposes of this study, the negative affect subscale was extracted for analyses and evidenced acceptable internal consistency in the current sample ($\alpha = .89$).

Future Health Behavior Items. Participants were requested to fill out a short 3-item questionnaire, with questions on current and future weight-loss focused health behaviors (i.e. dieting, exercising, and eating "healthy foods"; see Appendix F). Participants rated each item on a scale of 1-(*very unlikely*) to 7-(*very likely*). Scores were then summed to obtain a total measure of motivation for future health behaviors, with higher scores indicating greater intention to engage in these behaviors ($\alpha = .58$).

Manipulation Checks. Lastly, the survey included several manipulation check items to ensure that participants' perceptions matched the group they were assigned to (see Appendix I). Two items tested participants' memory recall of the specific manipulations that their condition presented them with (i.e. "*Please choose the response*

that best describes the pair of jeans you originally tried on;" "Please choose the image

that matches your 'fitting room attendant'.") Additionally, there was also a more

subjective "potency" check to measure the extent to which participants could cognitively

and emotionally experience the fitting room vignette (i.e. *"Thinking back to the imagined*

scenario, how well were you able to imagine yourself in that situation?"), rated on a

continuous scale from 0-(*not well at all*) to 100-(*exceedingly well*).

Hypotheses Revisited

The purpose of this study was to examine simultaneously the presence of visual

cues and a clothing size vignette and determine their influence on body image. The study

was designed with two manipulations: imagined pant size ("too tight, "expected fit", and"

"too loose") and visual cue (low BMI, high BMI) to investigate fluctuations in

participants' body image.

1) First, it was hypothesized that the imagined pant tightness level would result in group differences among body dissatisfaction, mood, self- and body esteem, and future health behaviors. Specifically, it was predicted that participants who imagined trying on tighter pants would report higher levels of body dissatisfaction and negative affect, less self-esteem and body esteem, and greater intention to engage in weight-loss focused health behaviors afterwards (i.e. their resolve to diet or exercise regularly in the future).
2) Second, it was predicted that the fitting room attendant level would also have a main effect on these variables. Specifically, it was hypothesized that participants who were exposed to a fitting room attendant with lower BMI would report higher levels of body dissatisfaction and negative affect, lower self- and body esteem, and greater intention to engage in weight-loss focused health behaviors.
3) Third, the main effects were expected to be qualified by an interaction, such that as the fitting room attendants' BMI scores changed from "high BMI" to "low BMI", the body dissatisfaction reported by the participant would increase differentially according to pant size, with the combination of the "low BMI" attendant and the "too tight" pants producing the most negative body dissatisfaction.

Primary Analyses

Results for this study were analyzed using the statistical software package SPSS.

Missing data were filled in with the function of linear trend at point. A series of

univariate ANOVAs were conducted with the two independent variables of the pant size

(3 levels—"too tight", "expected fit", and "too loose") and the visual cue (2 levels—"low

BMI", "high BMI") manipulations. The dependent variables included the scores on each

post-manipulation assessment: body dissatisfaction (BSQ, BISS), self-esteem (RSES),

body esteem (BES—weight concern subscale), mood (PANAS—negative affect

subscale), and health behaviors (future health behavior items). Table 3 provides a

summary of the descriptive statistics.

Table 3. List of dependent variables' descriptive statistics.

Variable	Range	Mean (*SD*)
BSQ	34.00-204.00	101.85 (*37.56*)
BISS	1.00-9.00	5.03 (*1.73*)
RSES	13.00-40.00	28.12 (*4.97*)
BES	11.00-50.00	28.68 (*8.88*)
PANAS	10.00-40.00	18.42 (*7.50*)
FHB	3.00-21.00	11.69 (*3.89*)

Hypothesis 1: Main Effect of Pant Size Manipulation. First, dependent

variables were analyzed with respect to the pant size manipulation.

Data analysis indicated mixed results for the main effect of pant size manipulation

on body dissatisfaction. Depending on which aspect of body dissatisfaction was

measured, significance of results varied. First, trait body dissatisfaction, as measured by

the BSQ, did not vary significantly with the pant size condition ($F(2, 373) = 1.05$, $p =$

.35, $\eta_p^2 = .01$). However, the pant size manipulation was shown to have a significant main

effect on state body dissatisfaction, as measured by the BISS ($F(2, 373) = 20.32$, $p <$

.001, $\eta_p^2 = .10$). Tukey *post hoc* comparisons indicated that the "too tight" and "expected

fit" levels differed significantly (M_{diff} = -1.10, $p < .001$, d = -.66) as well as the ""too tight" and "too loose" conditions (M_{diff} = -1.18, $p < .001$, d = -.71). Participants who imagined trying on pants that were expected to fit, but fit too tightly, reported higher levels of state body dissatisfaction than participants in the other conditions (Figure 2).
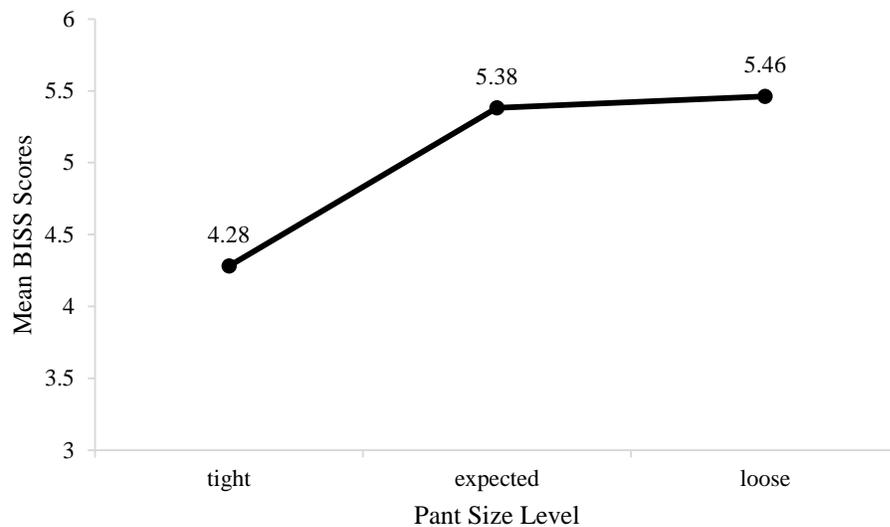
Figure 2. Mean BISS scores by pant size level (lower scores indicate higher body dissatisfaction).

Analyses indicated that the pant size manipulation had a significant main effect on the dependent variable of negative affect, as measured by the PANAS ($F(2, 373) = 4.17$, $p = .02$, $\eta_p^2 = .02$). *Post hoc* comparisons revealed that the "too tight" and "expected fit" conditions differed significantly (M_{diff} = 2.22, $p < .05$, $d = .30$) as did the ""too tight" and "too loose" levels (M_{diff} = 2.41, $p = .03$, $d = .32$). That is, participants who were randomized into the "too tight" pant size condition reported significantly higher levels of negative affect than did participants in the other two groups (Figure 3).
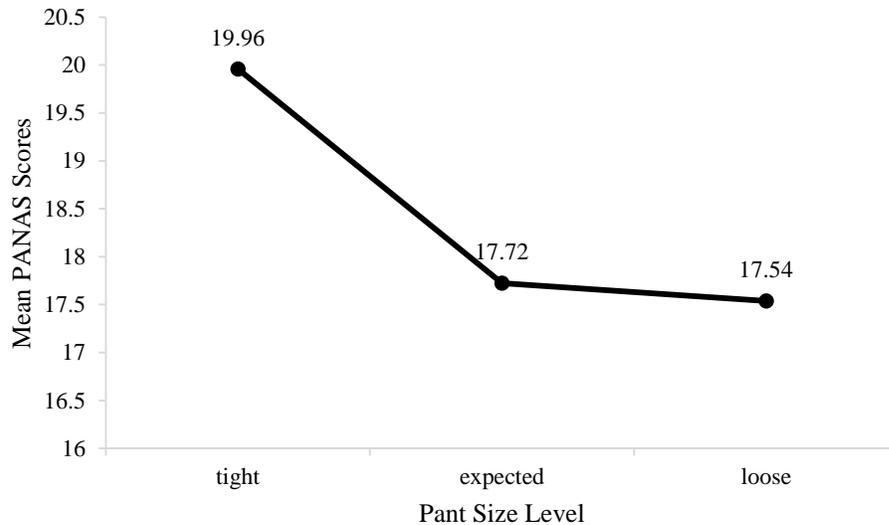
Figure 3. Mean PANAS—negative affect scores by pant size level (higher scores indicate more negative affect).

When the RSES was used as a measure of overall self-esteem, analyses supported a significant main effect of the pant size manipulation ($F(2, 373) = 3.40$, $p = .03$, $\eta_p^2 = .02$). *Post hoc* comparisons revealed that the difference between the "too tight" and "too loose" conditions was significant ($M_{diff} = -1.46$, $p = .05$, $d = -.30$). Therefore, there is some evidence to imply that participants who imagined trying on pants that were expected to fit, but fit too tightly, reported lower self-esteem than the other two conditions (Figure 4).

There was no indication for a similar main effect on body esteem, as measured by the BES—weight concern subscale ($F(2, 373) = 1.40$, $p = .25$, $\eta_p^2 = .007$). Therefore, no *post hoc* tests were calculated for this variable. Results also did not indicate a main effect of the pant size manipulation on the index of self-reported intention towards future health behaviors (eating healthy foods, dieting, and exercising regularly; $F(2, 373) = .41$, $p = .67$, $\eta_p^2 = .003$).
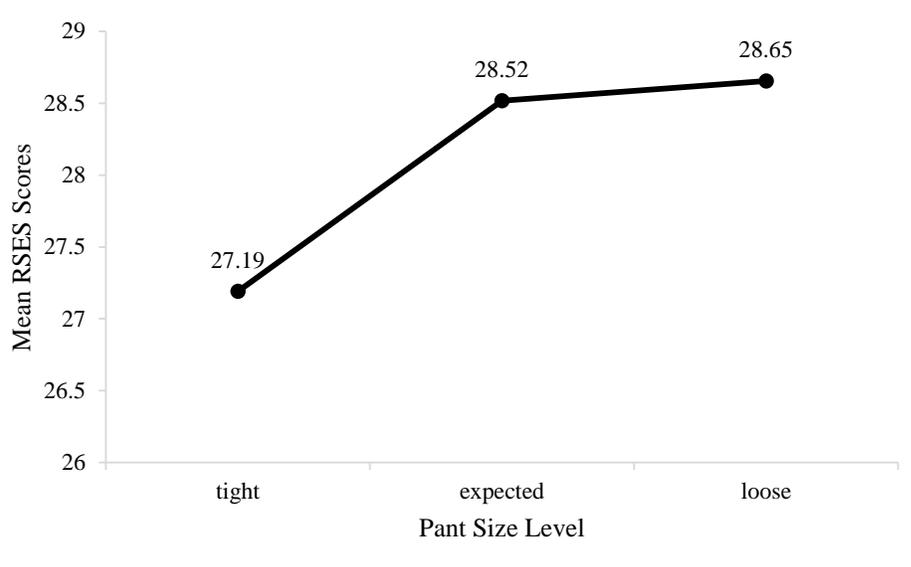
Figure 4. Mean RSES scores by pant size level.

Hypothesis 2: Main Effect of Fitting Room Attendant Manipulation. Next, dependent variables were analyzed with respect to the fitting room attendant manipulation. There was no support for a main effect of the fitting room attendant manipulation on either of the measures of body dissatisfaction: the BSQ ($F(1, 373) = .12$, $p = .73$, $\eta_p^2 < .001$) and the BISS ($F(1, 373) = .07$, $p = .80$, $\eta_p^2 < .001$). There was also no main effect of the fitting room attendant manipulation on the negative affect subscale of the PANAS ($F(1, 373) = .79$, $p = .38$, $\eta_p^2 = .002$). Additionally, there was no such effect for the variable of self-esteem when measured by the RSES ($F(1, 373) = .85$, $p = .37$, $\eta_p^2 = .002$) or body esteem from the BES—weight concern subscale ($F(1, 373) = 1.31$, $p = .25$, $\eta_p^2 = .004$). Analyses also did not support a main effect of this manipulation on self-reported intention of engaging in future health behaviors (eating healthy foods, dieting, and exercising regularly; $F(1, 373) = .48$, $p = .649$, $\eta_p^2 = .002$).

Hypothesis 3: Interaction of Pant Size and Fitting Room Attendant

Manipulations. Finally, dependent variables were analyzed with respect to the levels of both the pant size and fitting room attendant manipulations. There was no evidence to support an interaction of the two manipulations on either of the measures of body dissatisfaction: the BSQ ($F(2, 373) = .23$, $p = .80$, $\eta_p^2 = .001$) and the BISS ($F(2, 373) = .32$, $p = .72$, $\eta_p^2 = .002$). There was also no interaction effect on the negative affect subscale of the PANAS ($F(2, 373) = .38$, $p = .68$, $\eta_p^2 = .002$). Additionally, there was no such interaction effect for the self-esteem when measured by the RSES ($F(2, 373) = .54$, $p = .59$, $\eta_p^2 = .003$) or the BES—weight concern subscale ($F(2, 373) = .01$, $p = .99$, $\eta_p^2 < .001$). Analyses also did not support an interaction effect on self-reported intention of engaging in future health behaviors (eating healthy foods, dieting, and exercising regularly; $F(2, 373) = .35$, $p = .70$, $\eta_p^2 = .002$).

Exploratory Analyses

Manipulation Checks. There were several items administered at the end of the questionnaire to check the validity of the manipulations and the overall experiment. There were three items in total: one to assess recall of pant size level (i.e. "*Please choose the response that best describes the pair of jeans you originally tried on.";* this item was coded 0 for inaccurate and 1 for accurate recall*)*, one to assess recall of fitting room attendant level (*"Please choose the image that matches your 'fitting room attendant'.";* this item was also coded 0 for inaccurate and 1 for accurate recall), and one to assess general potency of the imagined scenario (i.e. *"Thinking back to the scenario, how well were you able to imagine yourself in that situation?";* this item was coded 0 for

responses in the 0-49 range and 1 for the 50-100 range). Overall, participants evidenced high rates of recall for the pant size manipulation (84.17%), high rates of recall for the fitting room attendant manipulation (82.59%), and moderate rates of potency for the imagined scenario (57.78%). In addition, 44.85% of participants were able to answer both recall items correctly *and* self-reported a potency of 50 or higher on the experimental vignette.

To evaluate whether or not the memory recall items were related to the potency variable, two 2 X 2 chi-square analyses were conducted with each memory recall item paired to the potency item. When the chi-square test of independence was performed to examine the relation between participants' pant size recall and scenario potency, the results were significant (X^2 (1, $N = 379$) = 4.78, $p = .03$). *Post hoc* comparisons were made according to Haberman's (1973) protocol, which recommends that each cell's adjusted residual be compared to the cutoff of absolute 2.00. If an individual cell's residual is greater than 2.00, it indicates the observed frequency is greater than one would expect by chance. If it is less than -2.00, that would indicate the observed frequency was significantly less than what one would expect by chance.

As can be seen in Table 4, the number of participants who could recall accurately the correct pant size *and* imagine themselves in the situation was significantly greater than one would expect by chance (Adjusted Residual = 2.2, $p < .05$). On the other hand, there was no relationship between recall of the fitting room attendant manipulation and the scenario potency item (X^2 (1, $N = 379$) = .74, $p = .39$, see Table 5 for a summary of cross tabulations). This suggests that there was no association between participants' memory for the visual cue and their ability to immerse themselves in the scenario.

Table 4. Chi-square analyses of pant-size and imagine manipulation check.

			Imagine Check		
Item		Counts	0	1	Total
Pants Check	0	Count	33	27	60
		Expected Count	25.3	34.7	60
		Adjusted Residual	2.2	-2.2	
	1	Count	127	192	319
		Expected Count	134.7	184.3	319
		Adjusted Residual	-2.2	2.2	
Total		Count	160	219	379
		Expected Count	160	219	379

Table 5. Chi-square analyses of fitting room attendant and imagine manipulation check.

			Imagine Check		
Item		Counts	0	1	Total
Fitting Room Attendant Check	0	Count	31	35	66
		Expected Count	27.9	38.1	66
		Adjusted Residual	.9	-.9	
	1	Count	129	184	313
		Expected Count	132.1	180.9	313
		Adjusted Residual	-.9	.9	
Total		Count	160	219	379
		Expected Count	160	219	379

Furthermore, in order to evaluate the effect of the manipulation checks, the

primary analyses were repeated; however, only those participants who recalled both items

accurately and were able to imagine the scenario were included ($N = 170$). The resulting

main effects for most dependent variables did not change as a function of this re-analysis, though there was evidence for a significant effect of the pant size manipulation on the weight concern subscale of the BES ($F(2, 170) = 4.03$, $p = .02$, $\eta_p^2 = .05$). *Post hoc* comparisons revealed that participants in the "too tight" condition reported significantly lower body esteem than those in the "too loose" condition ($M_{diff} = -5.36$, $p = .01$, $d = -.36$). However, there was no main effect of the fitting room attendant variables ($F(1, 170) = 2.09$, $p = .15$, $\eta_p^2 = .01$) or interaction ($F(2, 170) = .38$, $p = .68$, $\eta_p^2 = .01$). This finding indicates that for the participants who were able to recall their manipulation conditions *and* who self-reported that they were able to imagine themselves in the clothes fitting scenario (with at least 50% potency), those who imagined trying on pants that were expected to fit but fit too tightly reported lower body esteem than those who imagined trying on pants that fit too loosely (Figure 5).
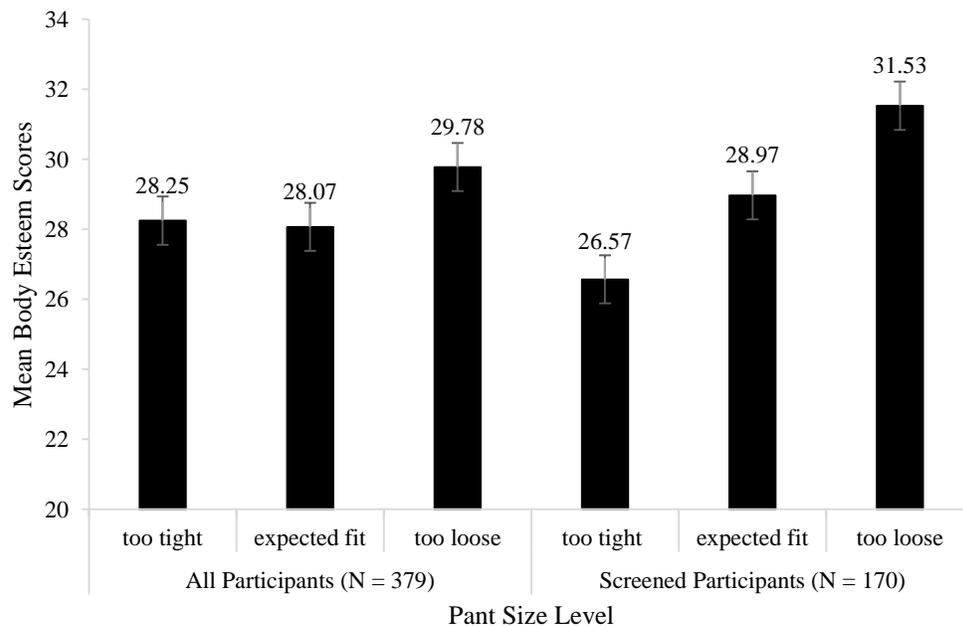
Figure 5. Body esteem mean scores by pant size condition and participant screening.

Effects of State vs. Trait Body Dissatisfaction. As mentioned previously,

though the BSQ and BISS both measure body dissatisfaction, there are important

differences between the "state" and "trait" aspects. As such, a series of 2 (low BSQ, high

BSQ) X 2 (low BISS, high BISS) between-subjects ANOVAs were conducted using the

mean-split scores of the BSQ (low: $M = 72.40$, $SD = 18.80$; vs. high: $M = 133.40$, $SD =$

24.81) and BISS (low: $M = 6.58$, $SD = .97$; vs. high: $M = 3.72$, $SD = 1.00$) to investigate

the effects on mood, self-/body esteem, and future health behaviors.

When an ANOVA was conducted using negative affect as the dependent measure,

results revealed a significant main effect for the BSQ ($F(1, 379) = 20.26$, $p < .001$, $\eta_p^2 =$

.05), a main effect for the BISS ($F(1, 379) = 39.99$, $p < .001$, $\eta_p^2 = .10$), and a significant

interaction term ($F(1, 379) = 9.24$, $p = .003$, $\eta_p^2 = .02$). While controlling for Type 1 error

with the Bonferroni correction, *post hoc* independent *t*-tests were conducted. Within the

level of low trait body dissatisfaction, a *t*-test revealed significant differences between

low and high state dissatisfaction ($t(194) = 2.83$, $p = .01$, $d = .41$). Within the level of

high trait body dissatisfaction, there were also significant differences between low and

high state dissatisfaction ($t(181) = 5.59$, $p < .001$, $d = .83$). Overall, findings indicated

that, although state body dissatisfaction always influenced greater levels of negative

affect, the relationship was more extreme when participants also had high trait body

dissatisfaction. In other words, having high levels of both types of body dissatisfaction

led to the greatest increases in negative affect (Figure 6).
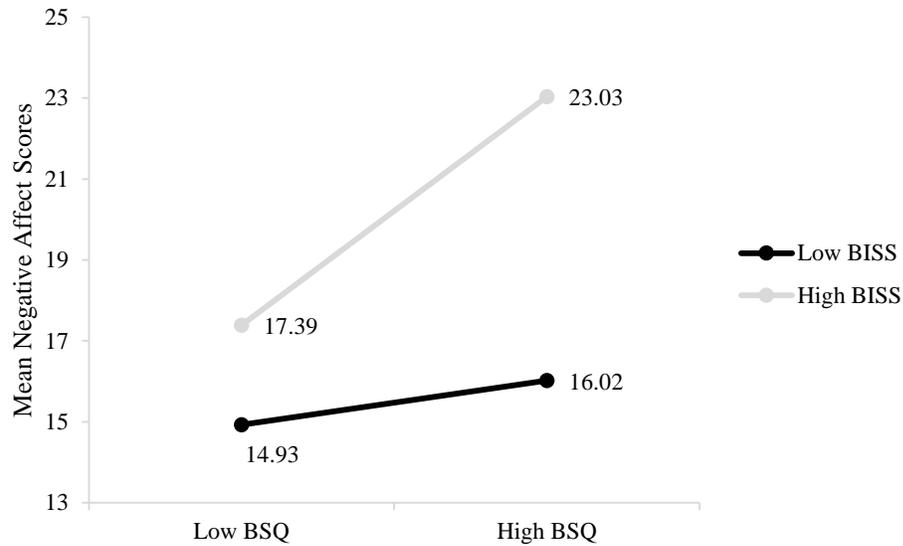
Figure 6. Mean scores of negative affect by BISS and BSQ levels.

To investigate the effects of state and trait body dissatisfaction on self-esteem, as measured by the RSES, another 2 X 2 ANOVA was conducted. A main effect of the BSQ was found ($F(1, 379) = 25.59$, $p < .001$, $\eta_p^2 = .06$) and *post hoc* comparisons revealed that participants with higher levels of trait body dissatisfaction reported lower self-esteem ($M_{diff} = -3.87$, $p < .001$, $d = -.84$). A main effect of the BISS was also found ($F(1, 379) = 60.85$, $p < .001$, $\eta_p^2 = .14$), with *post hoc* comparisons indicating that those with higher levels of state body dissatisfaction also reported lower self-esteem ($M_{diff} = -4.72$, $p < .001$, $d = -1.06$). However, there was no evidence of a significant interaction term ($F(1, 379) = .25$, $p = .62$, $\eta_p^2 = .001$) (Figure 7).
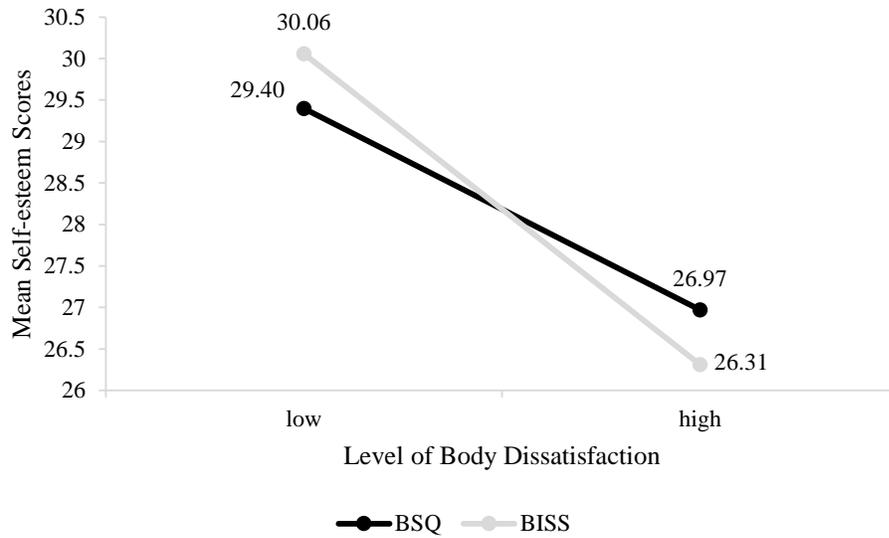
Figure 7. Mean scores of self-esteem by BSQ and BISS levels.

When an ANOVA was conducted using the variable of body esteem, as measured by the weight concern BES subscale, a significant main effect was found for the BSQ ($F(1, 379) = 73.28$, $p < .001$, $\eta_p^2 = .16$). Additionally, analyses indicated a main effect for the BISS ($F(1, 379) = 52.26$, $p < .001$, $\eta_p^2 = .12$) and a significant interaction term ($F(1, 379) = 6.53$, $p = .01$, $\eta_p^2 = .02$). While controlling for Type 1 error with the Bonferroni correction, *post hoc* independent *t*-tests were conducted. Within the level of low trait body dissatisfaction, a t-test revealed significant differences between low and high state dissatisfaction ($t(194) = 7.59$, $p < .001$, $d = 1.13$). Within the level of high trait body dissatisfaction, there were also significant differences between low and high state dissatisfaction ($t(181) = 5.59$, $p = .003$, $d = .51$). Findings indicated that, although state body dissatisfaction always negatively influenced body esteem, the relationship was actually more extreme when participants had *low* trait body dissatisfaction. In other

words, having low trait body dissatisfaction led to the variable of state body

dissatisfaction having a greater negative effect on body esteem (Figure 8).
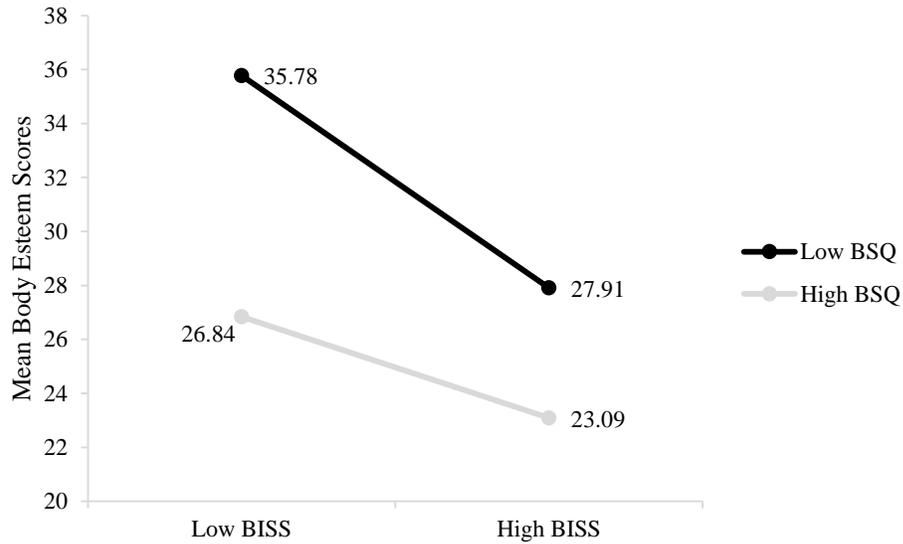
Figure 8. Mean body esteem by BSQ and BISS levels.

Finally, the overall index of intention to engage in future health behaviors (i.e.

diet, exercise, and eating healthy foods) was used as the dependent variable. Analyses

revealed evidence for a main effect of trait body dissatisfaction (BSQ) on future health

behaviors ($F(1, 312) = 17.59$, $p < .001$, $\eta_p^2 = .05$; Figure 9). Comparison of the marginal

group means indicated that those with higher levels of trait body dissatisfaction were

more likely to report intention to engage in weight-loss focused health behaviors in the

future ($M_{diff} = -1.96$, $p < .001$, $d = -.48$). However, there was neither a main effect of state

body dissatisfaction on this variable (BISS; $F(1, 312) = .23$, $p = .64$, $\eta_p^2 = .001$) nor a

significant interaction term ($F(1, 312) = 1.15$, $p = .29$, $\eta_p^2 = .004$).
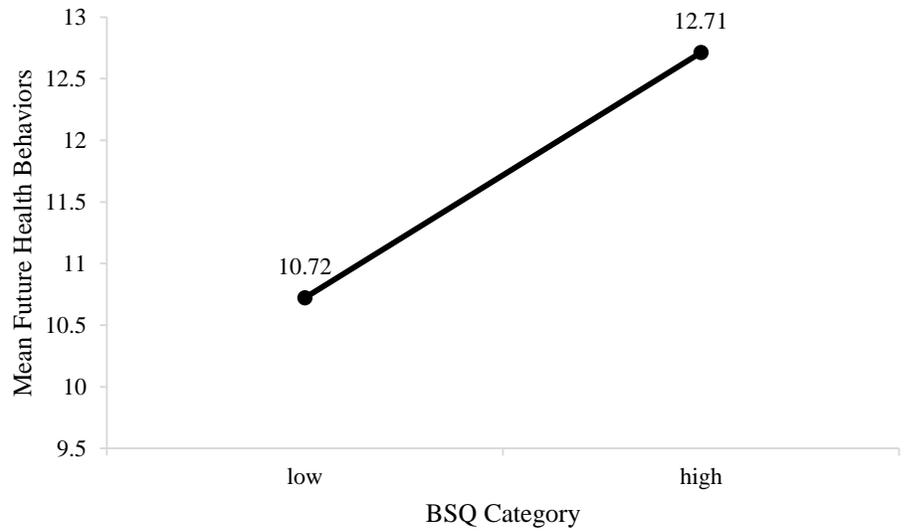
Figure 9. Mean scores of future health behaviors by BSQ level.

DISCUSSION

Primary Analyses Findings

The purpose of this study was to examine simultaneously the effects of a clothing size manipulation and a visual fitting room attendant manipulation on fluctuations in body image. Manipulating pant size was hypothesized to negatively impact female participants' body dissatisfaction, mood, self- and body esteem, and future health behaviors. Specifically, it was predicted that participants who imagined trying on tighter pants—and achieving fit in larger sizes—would report higher levels of body dissatisfaction and negative affect, less self-esteem and body esteem, and greater intention to engage in weight-loss focused health behaviors afterwards (i.e. their resolve to diet or exercise regularly in the future). Additionally, it was predicted that the fitting room attendant visual cue level would also negatively affect these variables, with participants who were exposed to a visual cue of a fitting room attendant with lower BMI reporting higher levels of body dissatisfaction and negative affect, lower self- and body esteem, and greater intention to engage in weight-loss focused health behaviors. Finally, the main effects were expected to be qualified by an interaction, such that as the fitting room attendants' BMI scores decreased, the body dissatisfaction reported by the participant would increase differentially according to pant size, with the "too tight" pants producing the most negative body dissatisfaction.

The hypothesis that the pant size manipulation would impact participants' body image was partially supported. The results of the study indicated that women who imagined trying on tighter pants in their scenarios did report greater disturbances in state

body dissatisfaction, global self-esteem, and negative affect. In effect, participants who imagined trying on pants that were expected to fit—but fit too tightly—reported higher state body dissatisfaction, more negative affect, and lower self-esteem than participants in one or both of the other conditions. This main effect of pant size on these variables indicates that, under certain experimental conditions, exposure to a clothing size vignette can, at least temporarily, lead to significantly higher state body dissatisfaction and negative mood, as well as lower global self-esteem.

These results appear consistent with previous studies on clothing size vignettes, with a slightly different set of body image-related dependent variables (Aydinoğlu & Krishna, 2010). This study also extends findings of previous clothing size manipulations, such as Patel's (2005) study and Schafer's (2008) follow-up. Since pant sizes often fluctuate from brand to brand, the experimental manipulation containing the fitting room scenario may have mimicked similar real-world situations in retail clothing stores. Therefore, it seems likely that the participants would have been able to connect the vignette to previous experiences and that the results of the current study may be somewhat generalized to such real-world scenarios. As such, these findings may be useful in structuring clinical interventions to reduce negative body image in social comparison situations that place clients at higher risk for damaging fluctuations.

On the other hand, the pant size manipulation was not found to have an impact on trait body dissatisfaction as measured by the BSQ, body esteem as measured by the BES—weight concern subscale, and future health behaviors as measured by the "healthy eating", "exercise", and "dieting" items. Perhaps the brief experience during the study was not disturbing enough to cause participants to alter their long-standing self-

perceptions affecting trait body dissatisfaction—which is thought to be more stable than state body dissatisfaction—and motivation to engage in weight-loss focused health behaviors. However, it was noteworthy that body esteem—a weight-loss focused aspect of self-esteem—was not affected by the pant-size manipulation, even when global self-esteem was.

The hypotheses that the fitting room attendant manipulation would impact participants' body image and that the two manipulations would produce an interaction effect were not supported. There are several possible explanations for the lack of the hypothesized findings. First, it may be the case that viewing virtual female images in social comparison scenarios may not be generalizable to real-life situations. Participants may not have been able to connect the images they were presented with to similar social comparison experiences in real life. Second, it is also possible that participants did not attend to the images they were presented with while listening to the imagined scenario during the vignette. Third, it is conceivable that the fitting room attendant manipulation was not powerful enough to affect significant fluctuations among participants' body image. Lastly, the effect of the pant-size manipulation may have been sufficiently powerful enough to "drown out" or dilute the simultaneous effect of the fitting room attendant manipulation. This may explain why only the pant-size manipulation showed a significant effect. Overall, the findings imply that women who tried on pants that were expected to fit—but fit too tightly—experienced more disturbances in negative body image, notwithstanding the condition of the fitting room attendant manipulation.

Exploratory Analyses Findings

     Manipulation Checks. Three items were employed to assess participants' memory recall of the manipulations and the potency of the imagined scenario. Two 2 X 2 chi-square analyses were run to explore whether or not there existed a relationship between recall of the pant-size manipulation and potency of the imagined scenario or recall of the fitting room attendant manipulation and the latter variable. Results showed support of a significant relationship between recall of the pant-size manipulation and the perceived potency of the imagined scenario; however, there was no relationship between recall of the fitting room attendant manipulation and the perceived potency of the imagined scenario. This indicates that the more participants could imagine themselves in the situation depicted by the experimental vignette, the greater their ability to recall the correct pant-size condition they were administered. On the other hand, the scope of imagination in the vignette was not related to whether or not the correct fitting room attendant image was selected in the manipulation check. These findings suggest that the participant's scope of imagination had greater impact on the pant-size recall which may have been more relevant to the experimental paradigm than the fitting room attendant manipulation.

     After screening data based on inclusion criteria from all three manipulation check items, the pant-size manipulation showed a significant main effect on the weight concern subscale of body esteem, a measure of negative feelings towards weight-loss focused areas of the body (e.g. waist, hips). Perhaps, this finding indicates that body esteem was capable of being influenced by situational factors such as the experimental vignette manipulation, only when participants were attending to the experiment. If such effects

could be generalized to real-life situations, it might suggest that individuals who are more attuned to their surroundings experience greater fluctuations in body esteem than others.

State vs. Trait Body Dissatisfaction. Additional exploratory analyses were conducted to compare the effects of state and trait body dissatisfaction on mood, self-esteem, body esteem, and future health behaviors. A series of 2 X 2 between-subjects designs contrasted the low and high levels of each type of body dissatisfaction. Results indicated state and trait dissatisfaction independently negatively impacted level of self-esteem but showed no additive effects. On the other hand, both types of body dissatisfaction interacted to produce even higher levels of negative affect; in other words, a participant possessing both state and trait body dissatisfaction would be more likely to report the highest levels of negative affect, indicating that mood is even more sensitive to situational fluctuations in body image. Future health behaviors were only affected by levels of trait body dissatisfaction, implying that motivation to engage in long-term weight-loss focused health behaviors would not be likely be influenced by situational fluctuations in body image. Only participants with stable body dissatisfaction would be more motivated to go on diets, eat more "health foods", and/or exercise regularly.

Finally, it is important to note a counterintuitive finding of body dissatisfaction on the variable of body esteem. Higher levels of both state and trait body dissatisfaction contributed to lower levels of body esteem; however, a significant interaction term indicated that those who reported low trait body dissatisfaction were even more likely to have their scores of body esteem be influenced by the level of state dissatisfaction. Perhaps, these individuals with low trait dissatisfaction had less experience with weight fluctuations and less internalization of the thin ideal, or were not accustomed to trying on

clothes that resulted in smaller fit than expected. Additionally, it is conceivable these participants had not had the opportunity to habituate to the accompanying negative mental and emotional states; as such, they were more susceptible to feeling negatively towards certain aspects of their body (e.g. waist, hips) after having been exposed to a situation designed to induce such feelings. If this were accurate, according to Groves and Thompson's (1970) dual-process habituation theory, clinical interventions to reduce the adverse outcomes of negative body image should explore methods of habituating clients without sensitizing them. These findings could also lend empirical support to body image exposure treatments, such as Hilbert, Tuschen, and Vögele's (2002) article outlining an intervention using prolonged and repeated body image exposure in a sample of individuals with binge-eating disorder.

Limitations of the Current Study

For the primary analyses, though the questionnaires measuring the dependent variables were administered after the manipulations, the conclusions may be limited due to the between-subjects design of the study. For the exploratory analyses, the BSQ was administered after the PANAS and the RSES, limiting evidence for causality. The participant sample in the current study was drawn from a pool of primarily white college-age females, with a largely healthy weight status (see Table 1). According to Yang and Colditz (2015), the prevalence of overweight and obese women in the US population is estimated at 29.74% and 36.84%, respectively—drastically outweighing the percentage of women in the healthy or underweight categories. Due to these discrepancies, our sample has limited generalizability to the overall population of females in the US.

Also, the methodology of having participants listen to hypothetical vignettes through a guided imagery protocol may not have been as generalizable to real-life situations as *in vivo* clothing size manipulations. Additionally, due to the online nature of the study, there was a lack of control in the participant's attention and environment. Furthermore, as previously mentioned, the presentation of virtual images in the fitting room attendant manipulation may not have been as powerful or relevant to the participants as photographs of real-life women.

Additionally, the only group differences found among the pant size conditions were between the "too tight" condition and one or both of the other conditions. None of the hypothesized differences were found between the "expected fit" and "too loose" pant size categories, indicating that there was no significant impact on body image. The lack of findings may have stemmed from two possible reasons: the lack of such an effect in the population or inherent limitations within the study design. Previous research has found support for the idea that women do feel better about themselves, reporting more positive mental imagery and attitude towards the product, after achieving fit in smaller sized pants (Aydinoğlu & Krishna, 2010). However, there is limited research on the effect of vanity sizing on other body image variables such as trait and state body dissatisfaction, meaning that it is possible an "expected fit" condition does not evidence more negative body image compared to a "too loose" condition. On the other hand, it is also conceivable that the particular language used in the vignette scenarios influenced participants' body image, priming them to answer in different ways. For example, in the "expected fit condition", participants imagined the pair of jeans as "flattering to their figure" and being "just tight enough in the right places". In contrast, the "too loose"

condition described the jeans as "bunching up around [their] legs" and that a belt would be required to "keep them up". Perhaps the positive language used in the "expected fit" condition compensated for the anticipated boost in body image from achieving fit in a smaller size of jeans in the "too loose" condition.

Future Directions

The current study demonstrated that women who imagined trying on jeans that were expected to fit—but fit too tightly—and afterwards, only achieved fit in jeans that were two sizes larger, reported more negative state body dissatisfaction, mood, and self-esteem than those in one or both of the other two conditions. However, the participants did not appear to be affected by visual cues of a virtual hypothetical "fitting room attendant" with either low or high BMI. This study did not take into account the pre-existing levels of body dissatisfaction, mood, or self-esteem before administering the manipulations. Future research may wish to examine the effects of a clothing-size social comparison situation based on participants' original levels of body image.

It is unclear if the findings of the pant size manipulation resulted from the necessity of finding larger sizes of pants to achieve fit or simply the thought of wearing pants that were uncomfortably tight. Forthcoming studies may want to clarify the actual agent of change in order to better structure clinical interventions designed to improve body image. Researchers in the field may also want to continue exploring the methodology of using hypothetical clothing size vignettes to examine body image, finding different methods of internal and external validation. For example, a vignette may be administered alongside an additional *in vivo* manipulation to examine the differences

or similarities in effects on body image. Finally, if more support is found for such a vignette methodology, it could strengthen the evidence for the effectiveness of tele-mental-health interventions (aka teletherapy) involving online modalities at a distance.

Summary

The current study demonstrated that ambiguous body checking cues such as women's pant sizes may have an effect on state body dissatisfaction, self-esteem, and mood. After imagining trying on jeans that were expected to fit—but fit too tightly—and then needing to find jeans that were two sizes larger to achieve fit, participants reported experiencing more negative body image. There was no effect of the visual cue of fitting room attendant on body image and there was also no evidence to support a qualifying interaction of the two manipulations. Future research should examine how pre-existing levels of body image concerns impact the effects of a pant-size manipulation in addition to exploring the internal and external validity of such hypothetical vignettes. Lastly, researchers can attempt to elucidate the exact reason that this manipulation had an effect on body image. Is it more due to the physical sensations of wearing pants that are uncomfortably tight or needing to achieve fit in larger sizes of pants? Overall, the findings from this study may be valuable to clinicians looking to structure interventions to improve body image in their clients.

REFERENCES

Asawarachan, T. (2013). *The Disney Influence on Kindergarten Girls' Body Image* (Unpublished doctoral dissertation). University of North Texas, Denton, TX.

Aydinoğlu, N. Z., & Krishna, A. (2010). Imagining thin: Why vanity sizing works. Available at SSRN 2549968.

Bair, C. E., Kelly, N. R., Serdar, K. L., & Mazzeo, S. E. (2012). Does the Internet function like magazines? An exploration of image-focused media, eating pathology, and body dissatisfaction. *Eating Behaviors, 13*(4), 398-401.

Barker, E. T., & Galambos, N. L. (2007). Body dissatisfaction, living away from parents, and poor social adjustment predict binge eating symptoms in young women making the transition to university. *Journal of Youth and Adolescence, 36*(7), 904-911.

Campbell, K., & Chase, K. (2004). That size 8 dress may soon be a 12. *Christian Science Monitor, 96*(68), 12.

Cash, T. F. (1990). The psychology of physical appearance: Aesthetics, attributes, and images. In T. F. Cash & T. Pruzinsky (Eds.), *Body images: Development, deviance, and change* (pp. 51–79). New York: Guilford.

Cash, T. F., Cash, D. W., & Butters, J. W. (1983). "Mirror, Mirror, on the Wall...?" Contrast Effects and Self-Evaluations of Physical Attractiveness. *Personality and Social Psychology Bulletin*, *9*(3), 351-358.

Cash, T. F., Fleming, E. C., Alindogan, J., Steadman, L., & Whitehead, A. (2002). Beyond body image as a trait: the development and validation of the Body Image States Scale. *Eating Disorders, 10*(2), 103-113.

Cattarin, J. A., Thompson, J. K., Thomas, C., & Williams, R. (2000). Body image, mood, and televised images of attractiveness: The role of social comparison. *Journal of Social and Clinical Psychology, 19*(2), 220.

Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairburn, C. G. (1987). The development and validation of the Body Shape Questionnaire. *International Journal of Eating Disorders, 6*, 485-494.

Cusumano, D. L., & Thompson, J. K. (1997). Body image and body shape ideals in magazines: Exposure, awareness, and internalization. *Sex Roles*, *37*(9), 701-721.

Fallon, A. (1990). Culture in the mirror: Sociocultural determinants of body image. In T. F. Cash (Ed.), *Body Images: Development, deviance, and change* (pp. 80-109). New York, NY: Guilford Press.

Fox, K. R. (1997). *The physical self: From motivation to well-being*. Champaign, IL: Human Kinetics.

Frankel, S. (1998). The fashion of destruction. *The Guardian*, *7*, 35-58.

Franzoi, S. L., & Shields, S. A. (1984). The Body Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment*, *48*(2), 173-178.

Gleeson, K., & Frith, H. (2006). (De) constructing body image. *Journal of Health Psychology*, *11*(1), 79-90.

Grilo, C. M., & Masheb, R. M. (2005). Correlates of body image dissatisfaction in treatment- seeking men and women with binge eating disorder. *International Journal of Eating Disorders, 38*(2), 162-166.

Groesz, L. M., Levine, M. P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders*, *31*(1), 1-16.

Grogan, S. (2008). *Body image: Understanding body dissatisfaction in men, women and children.* New York, NY: Routledge.

Groves, P. M., & Thompson, R. F. (1970). Habituation: a dual-process theory. *Psychological Review*, *77*(5), 419.

Haberman, S. J. (1973). The analysis of residuals in cross-classified tables. *Biometrics*, 205-220.

Haimovitz, D., Lansky, L. M., & O'reilly, P. (1993). Fluctuations in body satisfaction across situations. *International Journal of Eating Disorders*, *13*(1), 77-84.

Heinberg, L. J., & Thompson, J. K. (1995). Body image and televised images of thinness and attractiveness: A controlled laboratory investigation. *Journal of Social and Clinical Psychology, 14*(4), 325-338.

Hilbert, A., Tuschen-Caffier, B., & Vögele, C. (2002). Effects of prolonged and repeated body image exposure in binge-eating disorder. *Journal of Psychosomatic Research*, *52*(3), 137-144.

Jackman, L. P., Williamson, D. A., Netemeyer, R. G., & Anderson, D. A. (1995). Do weight-preoccupied women misinterpret ambiguous stimuli related to body size?. *Cognitive Therapy and Research*, *19*(3), 341-355.

Kinley, T. R. (2003). Size variation in women's pants. *Clothing and Textiles Research Journal, 21*(1), 19–31.

Kinley, T. R. (2010). The Effect of Clothing Size on Self-Esteem and Body Image. *Family and Consumer Sciences Research Journal*, *38*(3), 317-332.

Mazur, A. (1986). US trends in feminine beauty and overadaptation. *Journal of Sex Research*, *22*(3), 281-303.

Newsom, J. S. (2011). Miss representation curriculum.

Patel, S. M. (2005). *Effect of clothing size on women's body image, self-esteem, and mood.* (Unpublished master's thesis). Missouri State University, Springfield, Missouri.

Pope, H. G., Olivardia, R., Gruber, A., & Borowiecki, J. (1999). Evolving ideals of male body image as seen through action toys. *International Journal of Eating Disorders*, (26), 65-72.

Reel, J. J. (Ed.). (2012). *Eating disorders: An encyclopedia of causes, treatment, and prevention*. ABC-CLIO.

Rosen, J. C., Jones, A., Ramirez, E., & Waxman, S. (1996). Body shape questionnaire: Studies of validity and reliability. *International Journal of Eating Disorders, 20*(3), 315-319.

Rosenberg, M. (1965). Society and the adolescent self-image. *Princeton University Press.*

Russell, W. D., & Cox, R. H. (2003). Social physique anxiety, body dissatisfaction, and self-esteem in college females of differing exercise frequency, perceived weight discrepancy, and race. *Journal of Sport Behavior*, 26(3), 297-318.

Salter, J. (2013, October 04). 'Thigh gap' trend raises health concerns. Retrieved March 17, 2016, from http://www.usatoday.com/story/news/nation/2013/10/04/weight-loss-thigh-gap/2924733/

Sankowsky, M. H. (1981). The effect of a treatment based on the use of guided visuo-kinesthetic imagery on the alteration of negative body-cathexis in women. *Dissertation Abstracts International, 42*, (University Microfilms International No. 8203904).

Schafer, K. J. (2008). *Effect of a pant size manipulation on women's body image, self-esteem, and mood.* (Unpublished master's thesis). Missouri State University, Springfield, Missouri.

Schilder, P. The image and appearance of the human body. Oxford, England: Kegan Paul. (1935). 353 pp.

Shafran, R., Fairburn, C. G., Robinson, P., & Lask, B. (2004). Body checking and its avoidance in eating disorders. *International Journal of Eating Disorders*, *35*(1), 93-101.

Shafran, R., Lee, M., Payne, E., & Fairburn, C. G. (2007). An experimental analysis of body checking. *Behavior Research and Therapy, 45,* 114-121. doi:10.1016/j.brat.2006.01.015

Thompson, J.K., Heinberg, L.J., Altabe, M.N., & Tantleff-Dunn, S. (1999). Exacting beauty: Theory, assessment and treatment of body image disturbance. Washington, DC: American Psychological Association.

Tiggemann, M. (2001). Person× situation interactions in body dissatisfaction. *International Journal of Eating Disorders, 29*(1), 65-70.

Tiggemann, M., & Andrew, R. (2012). Clothes make a difference: The role of self-objectification. *Sex Roles*, *66*(9-10), 646-654.

Tiggemann, M., & Slater, A. (2004). Thin ideals in music television: A source of social comparison and body dissatisfaction. *International Journal of Eating Disorders, 35*(1), 48-58.

Vocks, S., Hechler, T., Rohrig, S., & Legenbauer, T. (2009). Effects of a physical exercise session on state body image: The influence of pre-experimental body dissatisfaction and concerns about weight and shape. *Psychology and Health*, *24*(6), 713-728.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063.

Yang, L., & Colditz, G. A. (2015). Prevalence of overweight and obesity in the United States, 2007-2012. *JAMA Internal Medicine*.

APPENDICES

Appendix A. Consumer Satisfaction

Please rate your satisfaction according to each statement.

	Extremely Dissatisfied	Quite Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Quite Satisfied	Extremely Satisfied
Clothing fit	○	○	○	○	○	○	○
Customer service	○	○	○	○	○	○	○
Overall	○	○	○	○	○	○	○

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
Overall how likely would you be to return to this store to shop in the future?	○	○	○	○	○	○	○
How likely would you be to buy this brand of pants?	○	○	○	○	○	○	○

Appendix B. Body Image States Scale (BISS)

For each of the items below, check the box beside the one statement that best describes how you feel **RIGHT NOW AT THIS VERY MOMENT.** Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now.

1. Right now I feel . . .
Extremely dissatisfied with my physical appearance
Mostly dissatisfied with my physical appearance
Moderately dissatisfied with my physical appearance
Slightly dissatisfied with my physical appearance
Neither dissatisfied nor satisfied with my physical appearance
Slightly satisfied with my physical appearance
Moderately satisfied with my physical appearance
Mostly satisfied with my physical appearance
Extremely satisfied with my physical appearance

2. Right now I feel . . .
Extremely satisfied with my body size and shape
Mostly satisfied with my body size and shape
Moderately satisfied with my body size and shape
Slightly satisfied with my body size and shape
Neither dissatisfied nor satisfied with my body size and shape
Slightly dissatisfied with my body size and shape
Moderately dissatisfied with my body size and shape
Mostly dissatisfied with my body size and shape
Extremely dissatisfied with my body size and shape

3. Right now I feel . . .
Extremely satisfied with my weight
Mostly dissatisfied with my weight
Moderately dissatisfied with my weight
Slightly dissatisfied with my weight
Neither dissatisfied nor satisfied with my weight
Slightly satisfied with my weight
Moderately satisfied with my weight
Mostly satisfied with my weight
Extremely satisfied with my weight

4. Right now I feel . . .
Extremely physically *attractive*
Very physically *attractive*
Moderately physically *attractive*
Slightly physically *attractive*
Neither attractive nor unattractive
Slightly physically *unattractive*
Moderately physically *unattractive*
Very physically *unattractive*
Extremely physically *unattractive*

5. Right now I feel . . .
A great deal worse about my looks than I usually feel
Much worse about my looks than I usually feel
Somewhat worse about my looks than I usually feel
Just slightly worse about my looks than I usually feel
About the same about my looks as usual
Just slightly better about my looks than I usually feel
Somewhat better about my looks than I usually feel
Much better about my looks than I usually feel
A great deal better about my looks than I usually feel

6. Right now I feel that I look . . .
A great deal better than the average person looks
Much better than the average person looks
Somewhat better than the average person looks
Just slightly better than the average person looks
About the same as the average person looks
Just slightly worse than the average person looks
Somewhat worse than the average person looks
Much worse than the average person looks
A great deal worse than the average person looks

Appendix C. Positive and Negative Affect Schedule (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt like this in the past few hours. Use the following scale to record your answers.				
Very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

Interested _____

Irritable _____

Distressed _____

Alert _____

Excited _____

Ashamed _____

Upset _____

Inspired _____

Strong _____

Nervous _____

Guilty _____

Determined _____

Scared _____

Attentive _____

Hostile _____

Jittery _____

Enthusiastic _____

Active _____

Proud _____

Afraid _____

Appendix D. Rosenberg Self-Esteem Scale (RSES)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1. On the whole, I am satisfied with myself.

Strongly Agree   Agree   Disagree   Strongly Disagree

2. At times I think I am no good at all.

Strongly Agree   Agree   Disagree   Strongly Disagree

3. I feel that I have a number of good qualities.

Strongly Agree   Agree   Disagree   Strongly Disagree

4. I am able to do things as well as most other people.

Strongly Agree   Agree   Disagree   Strongly Disagree

5. I feel I do not have much to be proud of.

Strongly Agree   Agree   Disagree   Strongly Disagree

6. I certainly feel useless at times.

Strongly Agree   Agree   Disagree   Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane with others.

Strongly Agree   Agree   Disagree   Strongly Disagree

8. I wish I could have more respect for myself.

Strongly Agree   Agree   Disagree   Strongly Disagree

9. All in all, I am inclined to feel that I am a failure.

Strongly Agree   Agree   Disagree   Strongly Disagree

10. I take a positive attitude toward myself.

Strongly Agree   Agree   Disagree   Strongly Disagree

Appendix E. Body Shape Questionnaire-34 (BSQ-34)

We should like to know how you have been feeling about your appearance over the
PAST FOUR WEEKS. Please read each question and circle the appropriate number to
the right. Please answer <u>all</u> the questions.

OVER THE PAST <u>FOUR WEEKS:</u>

```
Never
| Rarely
|   | Sometimes
|   |   | Often
|   |   |   | Very often
|   |   |   |   | Always
|   |   |   |   |   |
```

		Never	Rarely	Sometimes	Often	Very often	Always
1.	Has feeling bored made you brood about your shape?	1	2	3	4	5	6
2.	Have you been so worried about your shape that you have been feeling you ought to diet?	1	2	3	4	5	6
3.	Have you thought that your thighs, hips or bottom are too large for the rest of you?	1	2	3	4	5	6
4.	Have you been afraid that you might become fat (or fatter)?	1	2	3	4	5	6
5.	Have you worried about your flesh being not firm enough?	1	2	3	4	5	6
6.	Has feeling full (e.g. after eating a large meal) made you feel fat?	1	2	3	4	5	6
7.	Have you felt so bad about your shape that you have cried?	1	2	3	4	5	6
8.	Have you avoided running because your flesh might wobble?	1	2	3	4	5	6
9.	Has being with thin women made you feel self-conscious about your shape?	1	2	3	4	5	6
10.	Have you worried about your thighs spreading out when sitting down?	1	2	3	4	5	6
11.	Has eating even a small amount of food made you feel fat?	1	2	3	4	5	6
12.	Have you noticed the shape of other women and felt that your own shape compared unfavourably?	1	2	3	4	5	6

13. Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?   1   2   3   4   5   6

14. Has being naked, such as when taking a bath, made you feel fat?   1   2   3   4   5   6

15. Have you avoided wearing clothes which make you particularly aware of the shape of your body?   1   2   3   4   5   6

16. Have you imagine cutting off fleshy areas of your body?   1   2   3   4   5   6

17. Has eating sweets, cakes, or other high calorie food made you feel fat?   1   2   3   4   5   6

18. Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?   1   2   3   4   5   6

19. Have you felt excessively large and rounded?   1   2   3   4   5   6

20. Have you felt ashamed of your body?   1   2   3   4   5   6

21. Has worry about your shape made you diet?   1   2   3   4   5   6

22. Have you felt happiest about your shape when your stomach has been empty (e.g. in the morning)?   1   2   3   4   5   6

23. Have you thought that you are in the shape you are because you lack self-control?   1   2   3   4   5   6

24. Have you worried about other people seeing rolls of fat around your waist or stomach?   1   2   3   4   5   6

25. Have you felt that it is not fair that other women are thinner than you?   1   2   3   4   5   6

26. Have you vomited in order to feel thinner?   1   2   3   4   5   6

27. When in company have your worried about taking up too much room (e.g. sitting on a sofa, or a bus seat)?   1   2   3   4   5   6

28. Have you worried about your flesh being dimply?   1   2   3   4   5   6

29. Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?   1   2   3   4   5   6

30. Have you pinched areas of your body to see how much fat there is?   1   2   3   4   5   6

31. Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?   1   2   3   4   5   6

32. Have you taken laxatives in order to feel thinner?   1   2   3   4   5   6

33. Have you been particularly self-conscious about your shape when in the company of other people?   1   2   3   4   5   6

34. Has worry about your shape made you feel you ought to exercise?   1   2   3   4   5   6

Appendix F. Future Health Behavior Items

Healthy foods are defined as "foods containing a low quantity of fat, sugar, and salt".

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely are you to eat healthy food during the next 4 weeks?	○	○	○	○	○	○	○
How likely are you to exercise regularly during the next 4 weeks?	○	○	○	○	○	○	○

To diet is defined as "to restrict oneself to small amounts or special kinds of food in order to lose weight".

Are you currently on a diet?

○ Yes

○ No

To diet is defined as "to restrict oneself to small amounts or special kinds of food in order to lose weight".

	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
How likely are you to begin a diet during the next 4 weeks?	○	○	○	○	○	○	○

Appendix G. The Body Esteem Scale (BES)

Instructions: On this page are listed a number of body parts and functions. Please read each item and indicate how you feel about this part or function of <u>your own body</u> using the following scale (WC = weight concern subscale item):

1 = Have strong negative feelings   4 = Have moderate positive feelings
2 = Have moderate negative feelings   5 = Have strong positive feelings
3 = Have no feeling one way or the other
----
1. body scent _____
2. appetite _____ WC
3. nose _____
4. physical stamina _____
5. reflexes _____
6. lips _____
7. muscular strength _____
8. waist _____ WC
9. energy level _____
10. thighs _____ WC
11. ears _____
12. biceps _____
13. chin _____
14. body build _____ WC
15. physical coordination _____
16. buttocks _____ WC
17. agility _____
18. width of shoulders _____
19. arms _____
20. chest or breasts _____
21. appearance of eyes _____
22. cheeks/cheekbones _____
23. hips _____ WC
24. legs _____ WC
25. figure or physique _____ WC
26. sex drive _____
27. feet _____
28. sex organs _____
29. appearance of stomach _____ WC
30. health_____
31. sex activities_____
32. body hair_____
33. physical condition_____
34. face _____
35. weight_____ WC

Appendix H. Demographics

Please choose your gender.
- ○ Male
- ○ Female
- ○ I prefer not to answer.

Are you Hispanic or Latino?
- ○ Yes
- ○ No

What is your race? (Choose all that apply)
- ○ American Indian or Alaskan Native
- ○ Asian or Pacific Islander
- ○ African American/Black
- ○ Caucasian/White
- ○ Unknown
- ○ Other, please specify

What year of college are you currently in?
- ○ 1 (Freshman)
- ○ 2 (Sophomore)
- ○ 3 (Junior)
- ○ 4 (Senior)
- ○ 4+ (Senior)
- ○ Graduate Student

Are you currently in a relationship with a significant other?
- ○ Yes
- ○ No
- ○ I don't know

What is your age?

```
10  ▲
11
12
13
14
15  ▼
```

How many pounds do you weigh?

[_____ ▼]

What is your height in feet and inches? (ft' in")

[_____ ▼]

What is your current pant size?

○ 0

○ 00

○ 2

○ 4

○ 6

○ 8

○ 10

○ 12

○ 14

○ 16

○ 18

○ 20

○ 22

○ Other: please specify

[_____]

Do you currently suffer from one or more physical illnesses? If so, please describe.

○ Yes

[_____]

○ No

Appendix I. Manipulation Checks

The questions below are designed to test your memory of the scenario from the beginning of the survey.

Please choose the image that matches your "fitting room attendant":

○

○

○ I don't remember

Please choose the response that best describes the pair of jeans you originally tried on.

○ Too tight

○ Just right

○ Too loose

○ I don't remember

Thinking back to the imagined scenario, how well were you able to imagine yourself in that situation?

	0	10	20	30	40	50	60	70	80	90	100
0 (Not well at all) – 100 (Exceedingly well)											