OBJECTIFICATION THEORY AND ITS RELATION TO DISORDERED EATING: THE ROLE OF FEMINIST ATTITUDES AND INTERNALIZATION OF CULTURAL STANDARDS OF BEAUTY

A Dissertation

by

ANALESA N. CLARKE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2009

Major Subject: Psychology

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ABSTRACT

Objectification Theory and Its Relation to Disordered Eating: The Role of Feminist Attitudes and Internalization of Cultural Standards of Beauty. (August 2009)

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Chair of Advisory Committee: Dr. Marisol Perez

The current study had three main objectives: to examine the relation between trait and state self-objectification and various eating pathology, including restricted eating; to examine the role of general and specific feminist attitudes on body dissatisfaction and trait disordered eating; and to merge two empirically supported models of eating disorders. Using a quasi-experimental research design with an elaborate cover story, one hundred and three women completed a variety of baseline measures and were assigned to one of two state self-objectifying conditions (swimsuit vs. sweater) where body image and body shame were measured at post. Additionally, following the manipulation, participants caloric intake during a snack break was measured. Results indicated that trait self objectification was associated with disordered eating symptomatology and analyses found an effect of condition on body shame, and that this effect was moderated by trait self-objectification. These results were not documented for caloric intake and body dissatisfaction, likely due to time of assessment of these variables. Also, results indicate that objectification theory and the dual pathways model merge well and that in the dual pathway, body shame may be a component of body

dissatisfaction. Finally, feminist attitudes were also associated with body dissatisfaction but not with disordered eating symptoms. Implications for clinical work and future research are discussed.

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INTRODUCTION

An alarming majority of women in our culture are dissatisfied with their body weight and shape (Polivy & Herman, 2002). Research has demonstrated that women report high rates of body dissatisfaction even in the absence of engaging in weight loss behaviors (Klemchuk, Hutchingson, & Frank, 1990). Body dissatisfaction among women has been documented as early as the 1980s as being such a common occurrence and pervasive attitude that it has been widely termed “normative discontent” (Rodin, Silberstiern & Striegel-Moore, 1984). Normative discontent is a cause for social concern, particularly given that body dissatisfaction is a risk factor for a wide range of problematic eating behaviors including dieting, restrictive eating, laxative abuse, and vomiting (Garner, 1997;Thompson & Heinberg, 1999), and is also a major component of eating disorders as a whole (Garner, 1997). A sociocultural model of eating disorders has been used to interpret ‘normative discontent’ and why women are at risk for developing eating disorders. This model notes that the media, family, and peers all serve as communicators of cultural messages regarding weight and physical appearance (Harris, 1995) and that these sources idealize a thin body type (Levine & Smolack, 1996;1998; Stice, Schupak-Neurberg, Shaw & Stein, 1994; Tiggemann, 2002). Amplified pressures from the media, family and peers as well as reinforcement in interpersonal/social encounters lead women to internalize the thin ideal (Stice & Shaw, 1994), which is unrealistic and difficult for most to attain (Cusumano &

This dissertation follows the style of *Body Image*.

Thompson, 1997). Women who internalize but are unable to meet this physical ideal are then at risk for feeling bad about their bodies (Heinberg & Thompson, 1995) and engaging in unhealthy eating practices to attain this body type (Stormer & Thompson, 1995). There is plenty of evidence to support the sociocultural model of eating disorders (i.e. Striegel-Moore et al., 1986, Stice et al., 1994) but this model does not specify *how* women are pressured to internalize the thin ideal of beauty. Understanding how this pressure occurs can lead to targeted prevention efforts to reduce environmental risk factors that predispose biologically vulnerable individuals to eating disorders.

Socialization and the Objectification Theory

Objectification theory has been studied and examined to shed light on how cultural socialization has invariably led the modern western woman to have negative perceptions of her physical appearance. Objectification theory posits that western women are socialized to adopt and internalize an unhealthy view of themselves and that this socialization occurs as a result of their daily objectifying experiences, with the most common being sexual in nature. Objectification occurs when a person is viewed, evaluated, reduced to or treated by others as a mere physical entity (neglecting other aspects of the person) valued predominantly for the use of others (Fredrickson & Roberts. 1997). Objectification theory (Fredrickson & Roberts, 1997) posits that the most profound effect of pervasive exposure to objectification is that it may lead to a form of self-consciousness where women adopt or internalize the perspectives of observers who objectify their bodies and thus begin viewing themselves primarily as

objects for the pleasure of others. Self-objectification can be a pervasive trait-like tendency to adopt a third person view of the self. As such, self-objectification actually involves a propensity to perceive and describe one's body through observable (e.g., what do I look like?) rather than intrinsic characteristics (e.g., what am I capable of?).

According to Fredrickson and Roberts (1997), self-objectification can be conceptualized as both trait- and state-like. For women who tend to engage in trait self-objectification, a far greater value is placed on observable characteristics such as one's physical attractiveness, sex appeal, weight, etc., at the expense of non-observable traits such as physical health, emotional, intellectual and moral capacity, muscle strength, physical coordination and stamina (Noll & Fredrickson, 1998). Additionally, self-objectification can also be state-like in the sense that the degree of self-objectification tends to vary in different social contexts, particularly in circumstances where women are made conscious and aware that their bodies are being or will potentially be observed, evaluated or objectified. In such situations, women anticipate that they will be viewed as objects and become preoccupied with their appearance (Fredrickson & Roberts, 1997; McKinley& Hyde, 1996).

Self-Objectification and Disordered Eating

Self-objectification has been noted as having potentially harmful effects on women's body image and eating habits (Fredrickson & Roberts, 1997; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Roberts & Gettman, 2004). Because self-objectification involves an internalized high value of one's physical appearance on one's identity, high self-objectification is often characterized by regular self-monitoring and

anticipation of an outsider's perspective. This preoccupation with one's appearance coupled with the unrealistic and difficult to attain physical beauty standards, places women with high self-objectification at high risk to experience a variety of negative emotions regarding one's body such as body shame, body dissatisfaction and appearance anxiety (Fredrickson et. al., 1998; Mckinley 1998; 1999; Tiggemann & Kujring, 2004). To lessen the discomfort of these negative emotions, women may turn to unhealthy eating practices.

Evidence supports the theorized relationship between self-objectification and disordered eating establishing it as both a proximal and distal risk factor for eating disorders. It has been found that high levels of trait self-objectification prospectively predict increases in disordered eating patterns over time (Calogero, Davis, & Thompson, 2005; Fredrickson et al., 1998; McKinely, 1998; Moradi, Dirks, & Matteson, 2005; Noll & Fredrickson, 1998; Tiggemann & Slater, 2001; Tylka & Hill, 2004). Studies have documented trait self-objectification to be positive correlated with body shame (McKinely & Hyde, 1996), and that body shame, partially mediated the relationship between trait self-objectification and current drive for thinness (Calogero et al., 2005) and restrictive eating among adolescent girls and college women (Fredrickson et al., 1998; McKinely, 1998; Noll & Fredrickson, 1998; Slater & Tiggemann, 2002 Tiggemann & Slater, 2001).

Research has also documented that state self-objectification can be induced in a controlled setting and is also related to disordered eating. One of the most reliable and frequently used techniques to induce a state of self-objectification is randomly assigning

participants to try on a swimsuit or a sweater in which state-self objectification is induced in women wearing the swimsuit (Fredrickson et. al, 1998). Studies have found that this induced self-objectification produced experiences of body shame, increases in body dissatisfaction, and patterns of restrained eating (Fredrickson et al.,1998; Lavine, Sweeny, & Wagner, 1999). Other methods used to induce state self objectification include: having individuals imagine themselves on a beach or in a dressing room (Tiggemann, 2001); anticipate a male gaze (Calogero, 2004); viewing images of the thin ideal (see Groesz, Levine & Murnen, 2002 for a meta-analytic review); and exposing participants to sexually objectifying words and images (Roberts & Gettman, 2004). Likewise, similar patterns emerged demonstrating that state self-objectification produces negative affect towards one's body and more disordered eating symptoms. In sum, trait and state self-objectification have been documented as a contributing factor to body shame, appearance anxiety, body dissatisfaction, and disordered eating.

Limitations of Current Research

Despite the growing literature linking self-objectification to disordered eating, there are gaps in the research. First, research examining the role of self-objectification on body image disturbance has often neglected to incorporate risk factors that have been well-documented in other sociocultural models of eating disorders (i.e. internalization of sociocultural appearance ideals). This is surprising given that the objectification theory provides the explanation of how cultural socialization of women occurs which is lacking in the eating disorder literature. Little focus has also been given to potential buffers or protective factors of objectification. In addition, not all women who are objectified

display disordered eating and research is needed to differentiate for whom objectification leads to eating disordered psychopathology. Given widespread body image concerns in our culture and the increase of disordered eating pathology among women in the last few decades, identifying contextual and intrapersonal variables related to disordered eating pathology is crucial for a better understanding of how to prevent and treat these concerns. Therefore, this study is interested in merging two well-known sociocultural models for disordered eating by incorporating the internalization of cultural standards of beauty into the self-objectification framework.

Additionally, it is important to also identify buffers that may interfere with the link of self-objectification to disordered eating development. Relatively little research has been conducted about protective factors of eating disorders, however there are a number of suggested individual, family, and sociocultural factors that may protect individuals from eating disorders (Rodin et.al., 1990; Smolak, Striegel-Moore, 1996). Some individual factors include assertiveness (Rodin et. al., 1990), adequate coping skills (Rodin et. al, 1990; Striegel-Moore & Cachelin, 1999), high self esteem (Sisslak, Crago, Renger & Clark-Wagner, 1998) and feminist identity/attitudes (Dionne, Davis, Fox & Gurevich, 1995; Garner, 1997; Tiggemann & Stevens, 1999). Feminist attitudes may serve as one protective factor between self-objectification and eating disorders that this study will focus on.

Internalization of Cultural Standards of Beauty

In addition to being socialized to internalize the outsider's perspective of themselves, women are also socialized to internalize cultural ideals of their physical

appearance, which in Western society is often synonymous with thinness (Spitzack, 1990; Stice et. al., 1994). Empirical literature has documented the internalization of cultural standards of beauty (CSB) as a key factor in the development of poor body image and disordered eating patterns (e.g., Stice, 1994). Research has found that women who internalized cultural standards for their physical appearance had higher levels of body dissatisfaction and reported more negative attitudes about their body than those who did not internalize these standards (Heinberg, Thompson, & Stormer, 1995). These women were also more likely to experience more weight and body dissatisfaction following exposure to the thin ideal (Heinberg & Thompson, 1995) and the majority of variance in body image disturbance and eating disturbance could be accounted for by the tendency to be aware of and internalize CSB (Stormer & Thompson, 1995). Research has also shown that internalization of the CSB predicts future development of eating disorders (Stice & Agras, 1990; Stice, 2001). Collectively, this literature suggests an important relationship between the internalization of cultural standards of beauty (CSB) and disordered eating.

The most empirically supported sociocultural model of CSB is Stice's dual pathway model (1994) which states that sociocultural pressures to have a thin body create an internalization of the thin ideal which produces body dissatisfaction. Body dissatisfaction leads to eating disorder behaviors via two pathways: restrained eating and negative affect (see Figure 1). Each of these variables has been shown to have both a direct and indirect relationship to eating disorders and eating disorders symptomatology (Stice, Shaw Nemeroff, 1998). In a longitudinal study, the model was able to predict the

development of eating disorders and account for 33% of the variance in future eating disorder symptoms (Stice et al., 1998). In addition, extensive support exists for both negative affect and restrained eating serving as mediators between body dissatisfaction and disordered eating (Shepard & Ricciardelli, 1998). A prevention program developed based on this sociocultural model of eating disorders has successfully reduced the eating disorder risk factors in the model at three year follow-up but also reduced the onset of eating disorders to 6%, down from 15% in an assessment-only control group (Stice et al., 2008).

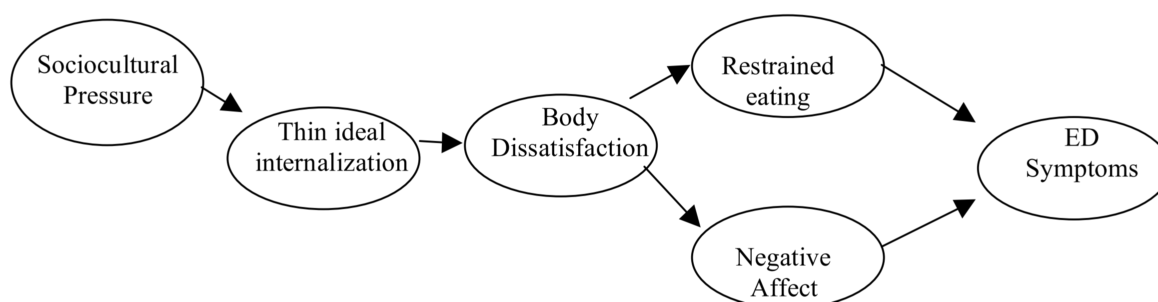

Figure 1. Dual Pathway Model

Objectification theory and its supporting literature can fit nicely into Stice's dual pathway model. It is hypothesized that trait self-objectification predicts thin ideal internalization. As previously mentioned, past work has found that trait self-objectification predicts body dissatisfaction (i.e. Noll & Fredrickson, 1998) but has not looked at potential mediators. By merging the two

models, it is hypothesized that thin ideal internalization mediates the relationship between trait self-objectification and body dissatisfaction. Past work on objectification theory has found that trait self-objectification predicts eating disorders symptoms but this relationship is mediated by body shame (Calogero et al., 2005, Fredrickson & Noll, 1998, McKinely, 1998, Slater & Tiggeman, 2002, Tiggeman & Slater, 2001). In Stice's dual pathway model, body shame can be considered one emotion of negative affect or it could be considered a component of body dissatisfaction. This study examined if body shame mediates the relationship between body dissatisfaction and eating disorder symptoms suggesting it is a component of negative emotion or if body shame mediated the relationship between thin ideal internalization and eating disorder symptoms. Consistent with the model, it is hypothesized that restrained eating also mediates the relationship between trait self-objectification and eating disorder symptoms.

Merging the objectification theory to Stice's dual pathway model is a novel idea. To date, only one study has addressed the internalization of CSB within the objectification theory of eating disorders (Moradi, Dirks & Matteson, 2005). Moradi and colleagues (2005) examined the potential mediating relationship of internalization of CSB to the relationship between reported sexual objectification experiences (i.e., "had people shout sexist comments, whistle, or make cat calls at me", "had sexist comments made about body parts of my body or clothing") and trait self-objectification and also to the link between reported sexual objectification to body shame and disordered eating. Using the Barron & Kenny (1986) method for detecting mediational relationships, the

researchers found that the internalization of CSB partially mediated the link of reported sexual objectifying experiences and trait self objectification but internalization of CSB fully mediated the link of sexually objectifying experiences to body shame, and eating disorder symptoms. While the findings suggest a major role of internalization of CSB on self-objectification and disordered eating, the study's reliance of self-report measures to assess disordered eating behaviors and sexually objectifying experiences is a major limitation. Reports of eating behaviors and sexually objectifying experiences are often influenced by factors such as memory recall and social desirability. Using more objective measures of eating and manipulating self-objectification levels would allow researchers to explain results in a more controlled context. Additionally, the ability to analyze these variables in a controlled setting allows us to make inferences about actual eating behavior in the context of recent self-objectifying experiences as opposed to a subjective and possibly erroneous report of self-objectifying experiences. Therefore, this study examined the patterns of internalization of CSB within a state induced self-objectification experiment. This was done by examining internalization of CSB as a potential moderator of exposure to potentially self-objectifying experiences (e.g. wearing a swimsuit) and actual state self-objectification. This study also examined internalization of CSB as a potential moderator of the link between induced self-objectification and restricted eating. Given that internalization of CSB is conceptualized as trait-like, there is no plausible reason to infer that an experimentally induced state of self-objectification will have a causal relationship with a more trait-like disposition and therefore a mediational relationship was not considered.

However, the purpose of this study was two-fold: not only was an induction of self-objectification assessed, but Moradi et al.'s (2005) findings were tested. This study assessed if internalization of CSB mediated the relationship between trait self-objectification and body dissatisfaction, and if restrained eating and body shame both served as mediators between body dissatisfaction and eating disorder symptoms.

Feminist Identity and Attitudes

Feminism is a personal and political movement, which is based on the premise that women and men should have political, economic and social equality (Shibley-Hyde, 2004). Therefore, feminist ideology is likely to favor the legal and social changes to achieve equality of the sexes, and specifically eradicate the insubordination of women in society. According to Tiggemann and Stevens (1999), feminist identity (one's identification or alignment with feminist ideology) is likely to be associated with values about women's roles that make women who adopt such values more resistant to cultural pressures to be thin and internalize the outsider's perspective. For example, feminist ideology encourages women to accept their individuality and to challenge social pressures that degrade or socially restrict women. Messages that promote the disproportionate importance of physical appearance to one's identity would be viewed as a means of limiting a woman's identity to how she physically appears, thereby neglecting her other aspects. Given this, women who adopt such feminist values may be less susceptible to disproportionately define themselves through their physical appearance or internalize messages that promote the importance of physical appearance.

Thus, women with more non-traditional or feminist values might be expected to be more satisfied with their bodies (Tiggemann & Stevens, 1999).

A limited number of studies have investigated the role of feminist identity and attitudes as a potential buffer to developing eating and body image disturbance. Studies have documented a positive relationship between feminist identity and body satisfaction where women who identified themselves as feminist were more satisfied with their body shape, weight, and overall physical appearance and reported less disordered eating symptomatology than women who identified themselves as having more traditional gender roles (Garner, 1997; Kelson, Kearney-Cooke & Lansky, 1990). Snyder and Hasbrouck (1996) took this investigation a step further by exploring how the level of femininity identification development was related to body and eating concerns. They found that women with less developed feminist identity were more concerned about being thin, reported more bulimic tendencies and were less satisfied with their bodies than women with more firmly developed feminist identity. These findings also suggest that a well developed feminist identity may limit women's vulnerability to cultural pressures that promote unhealthy body image and eating. However, another study suggests that it is one's feminist attitudes regarding physical attractiveness rather than general alignment with feminist ideology that is significantly related to body concerns (Dionne, Davis, Fox & Gurevich, 1995). Dionne and colleagues had 200 female college students complete measures of general and specific body dissatisfaction and a composite measure of feminist attitudes (the Composite of Feminist Ideology Scale). Controlling for age, body mass index, neuroticism and physical activity, they found that participants'

feminist attitudes of physical appearance was significantly and negatively related to specific and general body dissatisfaction. Interestingly, when attitudes toward physical appearance was controlled for, the composite of all other feminist attitudes was no longer related to body dissatisfaction, implying that it is the specific feminist attitudes about physical appearance that accounts for the relationship between feminist attitudes and body dissatisfaction. These findings imply that specific feminist attitudes towards physical appearance may be a more important factor in predicting poor body image and disordered eating than women's mere identification with feminist values or internalization of feminist values. For example, it is plausible that a woman would identify herself as feminist and internalize many feminist attitudes but not about appearance and thus would be similarly susceptible to body image concerns as her peers. This has not been studied, thus this study will examine if a general feminist attitude composite provides additional variance to the relationship between feminist attitudes about physical appearance and body and eating concerns. Additionally, the Dionne et al. (1995) study did not include any other indices of disordered eating symptomatology such as restrictive eating or drive for thinness nor did it examine feminist identity within in a sociocultural context. Therefore, this study examined the role of feminist attitudes (general and specifically attitudes towards physical appearance) within a comprehensive sociocultural model of eating disorders. Given that from birth women are socialized to adopt an unhealthy view of the role of physical appearance on their identity, it is unlikely that a later adoption of feminist values and attitudes would eradicate this earlier

socialization. Therefore, a feminist attitude is conceptualized as a moderator of exposure to self-objectifying experiences and state self-objectification.

Statement of Problem

There is still much to be learned about the mechanisms through which self-objectification leads to disordered eating. While there is evidence to imply that individual factors such as feminist attitudes and internalization of cultural standards of beauty might impact disordered eating symptomatology through its effect on of self-objectification, there is limited research on record examining the role of these factors in the context of objectification theory. This study aims to examine the relation of feminist attitudes and internalization of cultural standards of beauty on disordered eating through examining their impact on self-objectification.

Research Questions and Hypotheses

This study was based on the following research questions and hypotheses:

Question #1: Is trait self-objectification associated with eating disorder symptomatology?

H1: It was predicted that trait self-objectification would significantly predict trait disordered eating symptomatology; that is, the more trait self-objectification endorsed the more disordered eating symptoms endorsed.

Question #2: Does induced state self-objectification produce decrease in body image satisfaction, body shame and actual restricted eating?

H2: It was expected that individuals in the experimental condition would report significantly higher body dissatisfaction, body shame, and restricted eating following the manipulation compared to individuals assigned to the control condition.

<u>Question #3: Does internalization of cultural standards of beauty moderate the relationship between condition and restricted eating, body image satisfaction, and body shame ?</u>

H3: It was predicted that participants assigned to the experimental condition who also endorsed high levels of internalization would demonstrate more restricted eating, report less body image satisfaction and report more body shame than individuals who endorsed lower levels of internalization of cultural standards (see Figure 2).

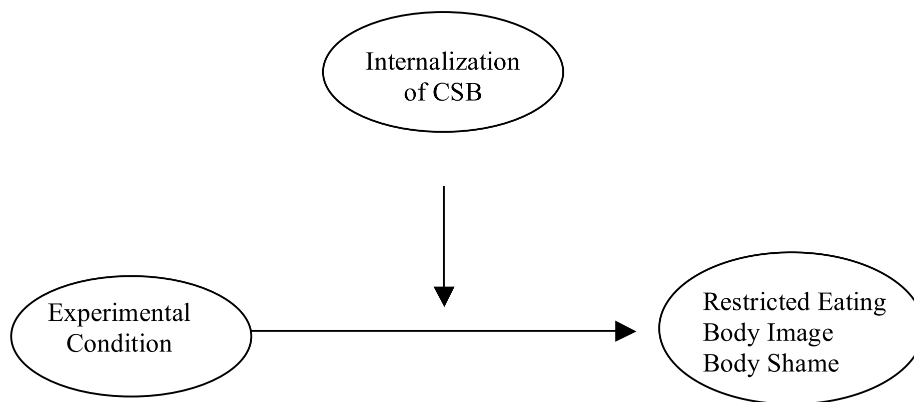

Figure 2. Hypothesis 3

<u>Question #4: Does trait self-objectification moderate the relationship between condition and restricted eating, body image satisfaction, and body shame?</u>

H4: It was expected that participants in the experimental condition who endorsed high levels of trait self -objectification would demonstrate more restrictive eating patterns, report less body image satisfaction and report more body shame than individuals who endorsed low levels of trait self-objectification (see Figure 3).

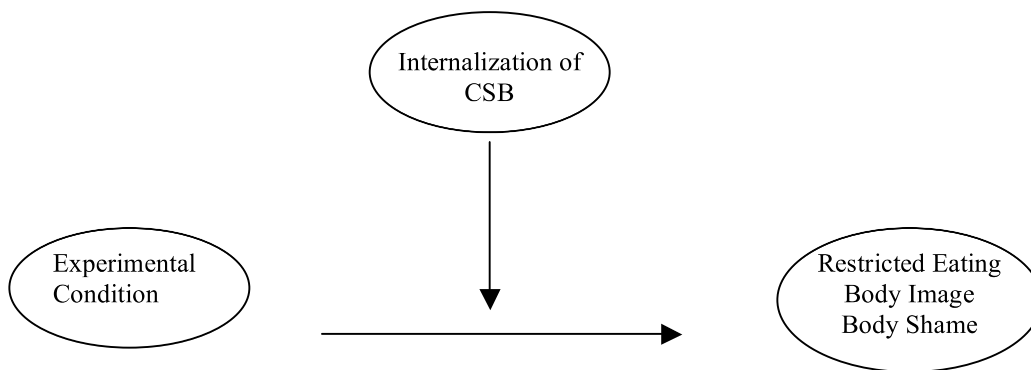

Figure 3. Hypothesis 4

<u>Question #5: Do general feminist attitudes moderate the relationship between condition and restricted eating, body image satisfaction, and body shame?</u>

H5: It was predicted that individuals in the experimental condition who also endorsed weak feminist attitudes would demonstrate more restricted eating, endorse more body

dissatisfaction and body shame than individuals in the experimental condition who endorsed strong feminist attitudes (see Figure 4).

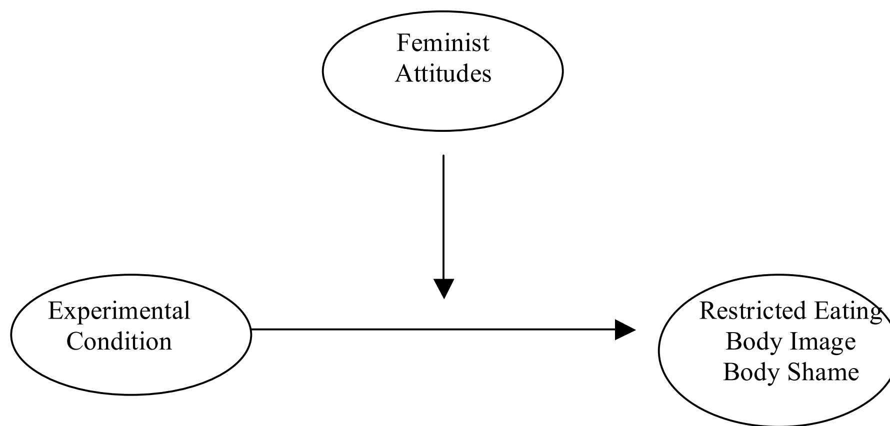

Figure 4. Hypothesis 5

<u>Question #6: Do general feminist attitudes and feminist attitudes about physical appearance predict trait eating disordered symptomatology?</u>

H6: It was predicted that both composite feminist attitudes and feminist attitudes about physical appearance would significantly predict disordered eating symptomatology so that, the more feminist attitudes endorsed the less trait eating disordered symptoms endorsed.

<u>Question #7: Does internalization of CSB mediate relationship between trait self-objectification and body dissatisfaction?</u>

H7: It was expected that the relationship between trait self-objectification and body dissatisfaction would be mediated by internalization of CSB

Question #8: Does restrained eating mediate the relationship between body dissatisfaction and bulimic symptomatology?

H8: Based on the Dual Pathway Model, it was expected that the relation between body dissatisfaction and bulimic symptoms would be mediated by restrained eating

Question #9: Does negative affect mediate the relationship between body dissatisfaction and bulimic symptomatology?

H9: Based on the Dual Pathway Model, it was expected that the relation between body dissatisfaction and bulimic symptoms would be mediated by negative affect.

Question #10: Does body shame mediate the relationship between body dissatisfaction and bulimic symptomatology?

H10: It was expected that the relation between body dissatisfaction and bulimic symptoms would be moderated by body shame.

Question #11: In the dual pathway model, is body shame a component of body dissatisfaction?

H11: It was hypothesized that if body shame was a component of body dissatisfaction then thin ideal internalization would predict body shame which in turn would predict eating disorder symptoms. The hypothesized model integrating hypotheses 7-11 is presented in Figure 5.

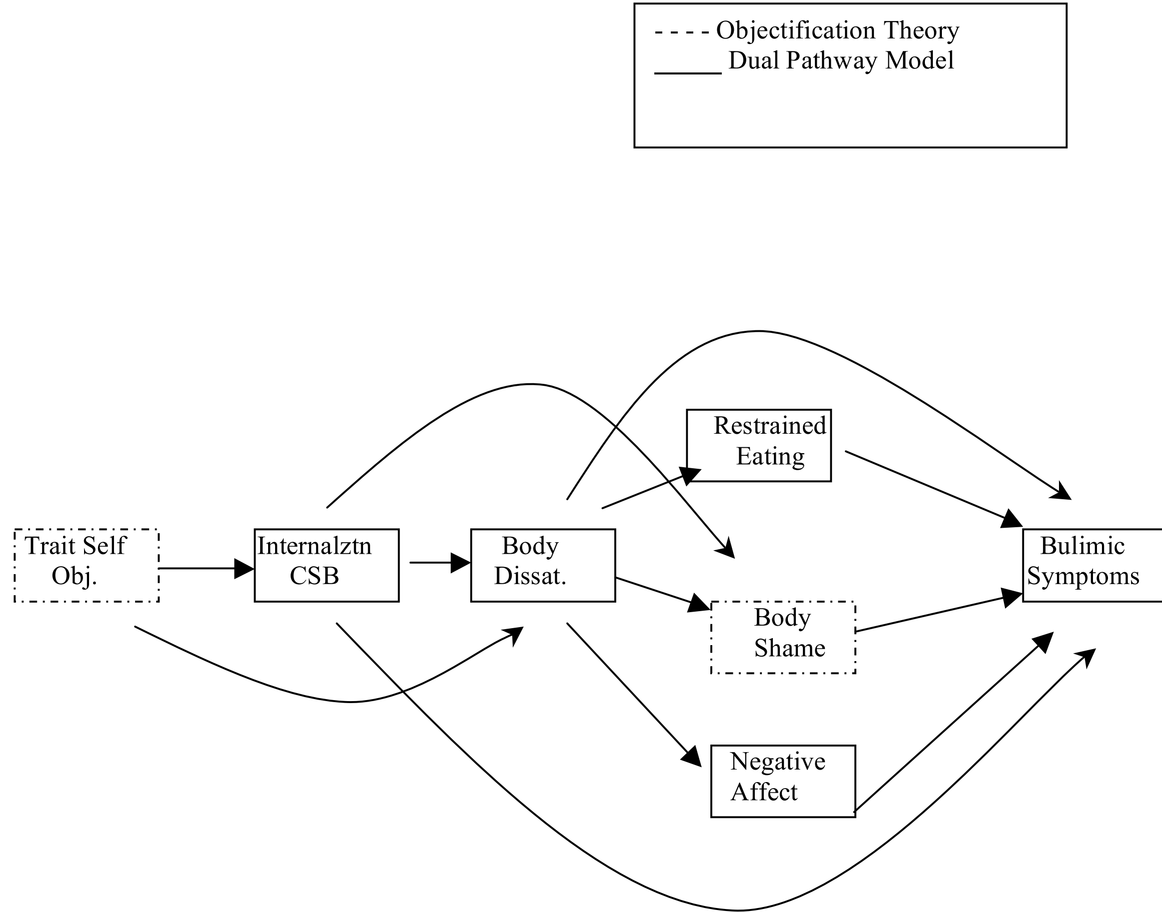

Figure 5. Hypothesized Model Merging Objectification Theory and the Dual Pathway Model.

METHODS

Participants

One hundred and three female undergraduate students recruited from undergraduate psychology classes participated in this study. Participants received 8 hours research credit in exchange for participation. The mean age of the participants was 18.68 (SD = 1.03) with a range from 17 to 22. Participants varied on ethnic background (70% Caucasian, 6 % Black, 11% Hispanic, 5%Asian, 7% Mixed and 2% other) and marital status (56% single and 44% dating/in a relationship). There were 3 women who did not report their age and 1 woman who did not report her marital status and ethnicity and were therefore excluded from all analyses related to these variables.

Measures

Demographic Questionnaire. A demographic questionnaire asked each participant her age, self-identified ethnicity, current height and weight, ideal weight, and relationship status.

State Body Image. The Body Image States Scale (BISS; Cash, Fleming, Alindogan, Steadman & Whitehead, 2002) assess momentary evaluative and affective aspects of body image. The scale consists of six items written to tap the following domains of current body experience: (1) dissatisfaction–satisfaction with one's overall physical appearance; (2) dissatisfaction–satisfaction with one's body size and shape; (3) dissatisfaction– satisfaction with one's weight; (4) feelings of physical attractiveness–unattractiveness; (5) current feelings about one's looks relative to how one usually feels; and (6) evaluation of one's appearance relative to how the average person looks.

Responses to each item are based on 9-point, bipolar, Likert-type scales, semantically anchored at each point. The scale is presented in a negative-to-positive direction for half of the items and a positive-to-negative direction for the other half. Scores on each dimension range from 1-9, with higher scores indicating more favorable body image states. BISS scores are computed by computing the mean of the six items after reverse scoring the 3 positive to negative items. Higher scores indicate more favorable body image. In a female college sample the internal consistency alpha coefficient was .77 and 2-3 week test-retest reliability was .69 (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002). In this sample the internal consistency alpha coefficients were .87 for Day 2 pre- manipulation and .85 post- manipulation.

Trait Body Image. The Multidimensional Body-Self Relations questionnaire (MBSRQ; Brown, Cash & Mikulka, 1990; Cash 2000) is a 69-item measure that assesses attitudinal body image. Items are rated on a 5-point scale from "definitely disagree" to "definitely agree". The measure consists of 10 subscales that address various aspects of body image: Appearance Evaluation, Appearance Orientation, Fitness Evaluation, Fitness Orientation, Health Evaluation, Health Orientation, Illness Orientation, Overweight Preoccupation, Self-Classified Weight, and Satisfaction with Specific Body Areas. All subscales alpha range from .73 to .90, with one week test-retest reliability ranging from .74 to .94 (Cash, 2000). This composite score demonstrated high internal consistency (Cronbach's alpha = .87) in this sample.

Trait Self-Objectification. The Self Objectification Questionnaire (SOQ; Noll & Frederickson, 1998) was used to determine participants' concerns with their physical

appearance. The SOQ is a 10-item measure, participants were asked to rank order 10 body attributes from greatest (9) to least (0) impact on their physical self-concept, regardless of how satisfied they were with each attribute. Difference scores are computed by subtracting the sum of the five competence attributes (e.g. health, strength) from the sum of the appearance attributes (e.g. weight). Scores range from 25 to -25; higher scores indicate greater self-objectification. Previous research has demonstrated high test-retest reliability (r=. 92 as cited in Miner-Rubino et al., 2002). However, in this study, a substantial number of participants (n= 13) misunderstood the instructions and instead of rank ordering the body attributes, assigned the same rank to multiple attributes. This participant completion error has also been documented in other literature (Myers & Crowther, 2007) and thus, a new method for scoring was implemented by creating two separate subscale scores and computing a difference score similar to that of the Fredrickson method. Subscale scores were computed by taking the averaged sum of ratings for the attributes of that category. For example, the averaged sum of the ratings for the physical appearance body attributes was used for the physical appearance subscale score. Subscale scores range from 0-9 with high scores on the physical appearance subscale indicating greater emphasis on appearance, while high scores on the physical competence score indicate greater emphasis on physical competence. Thus, it’s expected that these subscales would be negatively correlated with each other. A new SOQ score was then created by subtracting the averages sum of the five competence attributes (the competence subscale) from the averaged sum of the appearance attributes

(appearance subscale). With this method, Scores ranges from 9 to -9 where higher scores indicate greater self-objectification.

A correlation matrix was conducted to assess whether the new SOQ scoring system was significantly related to the old scoring system, and to other variables that have been documented as correlated with trait self-objectification (i.e. body size satisfaction) (Noll & Fredrickson, 1998). As shown in the correlation matrix displayed on Table 1, there was a perfect correlation between the new SOQ and old SOQ scoring system (r=1.00) implying that new method matches well with the old system. Also, both the old and new scores had similar positive correlations to a question of body size satisfaction and BMI. Overall, these results provide evidence that the new SOQ scoring system mirrors the old scoring system and indicated that the new system functions as an alternative method for capturing trait self-objectification. Therefore, the new SOQ scoring system was used in this study.

Table 1. Intercorrelations Between Old and New Subscale Scores

Variable	*1.*	*2.*	*3.*	*4.*	
1. Old SOQ score	*1.00*				
2.New SOQ score	*1.00***	*1.00*			
3. BMI	*.22**	*.23**	*1.00*		
4. body size dissatisfaction	*.36***	*.33***	*.57***	*1.00*	

Note: * p < .05; ** p < .01

Body Shame. The Body Shame Questionnaire (Fredrickson et.al, 1998) is a two-part indirect measure of body shame. For the purpose of this study only the second part of the measure was used in the context of the self objectification manipulation. That is, participants were asked to report their desire to change specific body attributes (e.g., weight, thighs, body build) on a 10-point scale if intensity of change 0 ("no desire to change") to 9 ("very intense desire to change") in order to feel comfortable wearing the clothing item (i.e. swimsuit or sweater) in public. Two subscores were calculated from this: 1. the total number of desired body changes (ranging from 0-14) and 2. total intensity of desired changes (ranging from 0- 126). A composite score was created by separately standardizing and summing the two subscores. Higher scores are interpreted as indicating greater body shame. This composite score has been demonstrated to have high internal consistency (Cronbach's alpha = .95 Fredrickson et. al., 1998; Cronbach's alpha =. 95; Calogero, Davis & Thompson, 2005). However, given how this measure was altered for this study, an alpha coefficient could not be computed.

Negative Affective. The Positive and Negative Affect Schedule (PANAS; Watson, et al., 1988) is a 20-item measure of positive and negative affect. Items are organized into 2 subscales: a ten item Positive affect (PA) and a ten item Negative Affect subscale (NA). Participants indicate the degree to which they are currently feeling a variety of emotions on a 5-point Likert of 1("very slightly/not at all") to 5("extremely") scale. PA is related to social activity and satisfaction and to the frequency of positive events (Clark & Watson, 1988) where high scores on the PA scale indicate a state of high energy, concentration and pleasurable engagement, whereas low

scores indicate sadness and lethargy. In contrast, NA is related to self-reported stress and (poor) coping (Wills, 1986). A low score on the NA scale indicates a state calmness and serenity. For the purpose of this study, only the NA scale was used. Internal consistency in a sample of 660 college students was .85 on the NA subscale (Watson et al., 1988). In this study the Cronbach's alpha was .82.

State Disordered Eating. State Restrained Eating was measured by subtracting participants caloric intake following the manipulation from caloric intake measured at baseline.

Trait Restrained Eating. The Dutch Restraint Eating Scale (DRES; van Strein, Frijters, can Straverren, Defares, & Deurenberg, 1986) is a 10-item measure of dietary restraint which required participants respond to items on a 5-point "never" to always" scale. The reliability and validity has been documented (van Strien et al.,1986; Wardle, 1987; Wardles & Beales, 1987). In the current sample, Cronbach's alpha was .94.

Trait Disordered Eating. The Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994) is a 36-item self-report measure adapted from the EDE (Fairburn & Cooper, 1993), which comprehensively assesses the severity of dietary restraint and concerns about eating, shape and weight of the preceding 28 days. The EDE-Q contains four subscales (Dietary Restraint, Eating Concern, Shape Concern, and Weight Concern), as well as frequency measures of binge eating and compensatory behaviors. Frequencies are, however, measured in terms of the number of days on which particular forms of behavior occur rather than the number of individual episodes because there is evidence with respect to binge eating that this method is more accurate (Rossiter,

Agras, Telch, & Bruce, 1992). Participants are asked to rate each item on a 7-point scale, which varies, by frequency of a particular symptom. For example, for “eating in secret” participants rated the frequency of this symptom on a 0 (has not eaten in secret) to 6 (has eaten in secret everyday). Higher scores indicate more psychopathology. The EDE-Q has been demonstrated to be psychometrically sound with concurrent (Fairburn & Beglin,1994;) and discriminant (Wilson, Nonas,& Rosenblum, 1993) validity as well as internal consistency and test-retest reliability estimates that support its use (Luce & Crowther, 1999). In this sample the internal consistency alpha for the subscales range was .60 -.90; Restraint Scale= .82 , Eating Concern Scale =.60, Weight Concern= .87, Shape Concern= .85, Global Scale= .90.

Internalization of Cultural Standards of Beauty. The Sociocultural Attitudes Towards Appearance Questionnaire – 3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda & Heinberg, 2004) is a 30 item self-report questionnaire that measures level of internalization of cultural ideal body types presented in the media. Participants respond to each item on a 5-point likert scale with responses ranging from 1 (“completely disagree”) to 5 (“completely agree’) with higher scores indicating a higher level of internalization. This study only used the Internalization – General subscale (SATAQ-I) which was used to measure internalization of sociocultural beliefs of attractiveness. This subscale assesses the extent to which one idealizes and compares oneself to movie stars, television, and magazine models. This subscale has demonstrated adequate internal consistency (Cronbach’s alpha= .96) in female college samples (Thompson et. al., 2004). In this sample the Cronbach’s alpha was .95.

Composite of Feminist Attitudes. The Liberal Feminist Attitude and Ideology Scale (LFAIS, Morgan, 1996) is a 60-item measure, which measures feminist attitudes across the domains of gender roles, goals of feminism, and feminist ideology. Participants were asked to rate each item on a 6-point likert scale of 1("strongly disagree") to 6 ("strongly agree"). A scale score is calculated by summing all the ratings with a high score indicating a stronger feminist position. This scale demonstrated good internal consistency in this sample (Cronbach's alpha = .85), and other samples (Cronbach's alpha = .94), with 4-week interval test –retest reliability of .83 (Morgan, 1996). The scale also has a strong concurrent validity to other feminist items with coefficients ranging form .61-.68, along with adequate divergent and concurrent validity (Morgan, 1996).

Feminist Attitudes related to Physical Appearance. The Physical Attractiveness Subscale of Composite Feminist Ideology Scale (CFIS, Dionne, 1992) consists of items related specifically to feminist views of physical appearance (e.g. "Our society puts too much emphasis on beauty, especially for women."). This scale asks participants to rate items on a 1(strongly disagree) to 4 (strongly agree) four point likert scale. Due to an error, participants rated 2 of the items on the original four-point likert scale and the other 5 items on a five point likert scale from 1(strongly agree) to 5 (strongly agree). After reverse scoring 4 items, participants' responses were summed to create a score for feminist attitudes. Higher scores indicate stronger subscription to feminist attitudes about physical appearance. This scale demonstrated low internal consistency in this sample (Cronbach's alpha= .50).

Manipulation Check

It is well documented that the swimsuit vs. sweater self-objectification manipulation causes participants to feel self-conscious about their bodies' shape, size and appearance as reflected in their responses to a modified version of the Twenty Statement Test (TST) administered during the manipulation. Therefore the TST was administered to confirm its effectiveness of the manipulation. The Twenty Statements Test (TST; Bugental Zelen, 1950; Cousins, 1989) asks participants to make different statements about their self and their identity by completing the statement "I am____". The coding scheme developed and validated by Fredrickson et al. (1998) was used. Two independent coders classified responses to the TST into one of five groupings- body shape and size (e.g. I am overweight, tall), other physical appearance (e.g. I am pale, I am blonde), physical competence (e.g. I am strong, I am energetic), trait and abilities, not body related (e.g. I am friendly, I am intelligent), and emotions (e.g. I am tired, I am content). The number of words in the "body shape and size" and "other physical appearance" category served as a measure for a state of self-objectification.

In this study, the TST was administered to participants after the manipulation and following a 10 minute snack break (approximately 15 minutes after the manipulation) and analyses revealed that the TST did not verify varying levels of self-objectification by condition. An independent sample t-test indicated that there was no significant difference among condition on TST scores [t (89) = .86; p = .44; M = 1.20, SD= 1.52 for the swimsuit condition; M = 1.42, SD= 1.19 for sweater condition].

Given the well-documented empirical evidence that this manipulation method has consistently induced a state of self-objectification (i.e. Hebl, King & Lin, 2004; Frederickson et al., 1998; Quinn, Kallen & Cathey,) it is assumed that the timing of TST administration in this study affected the TST to document a manipulation effect. In this study, the TST was administered after the participant tried on the item of clothing and had a snack break, whereas the previous research has had the participant fill out the TST while they had the clothing on (Fredrickson et al., 1998). This study also used another manipulation check where research assistants who proctored the study assessed if participants wore the assigned article of clothing. Research assistants inspected the presentation of the article of clothing (i.e. if the item was removed from the hanger or appeared worn) following the manipulation portion of the study. Participants who were suspected of not complying with manipulation instructions were not included in any analyses.

Procedure and Study Design

Participants signed up for a two-part study entitled “Examining Product Evaluation and Personality influences on Product Desirability” and were asked to attend two sessions that would last at most 4 hours to complete. On day one, participants attended their scheduled session where they completed a consent form with an elaborate cover story to mask the true nature of the study. This cover story was also verbally stated to the participants by the experimenter. Participants were informed that the purpose of the study was to examine the influence of personality characteristics and type of product evaluation on product desirability in a college population and that because it takes such a

long time to complete all aspects of the study, it will be conducted in two sessions over two days. They were informed that on that day (Day 1) they would complete an exhaustive number of questions (dispersed over two packets) that would assess their purchasing habits and various aspects of their personality and would rate products. Packets included a large number of questions regarding personality, purchasing habits, feelings and attitudes regarding product advertisement along with other items related to the cover story. Embedded in these filler items were measures of interest which included all trait measures – self objectification (SOQ), body image (MSBRQ), trait disordered eating (EDE-Q), restrained eating (DRES) and feminist attitudes (LFAIS) as well as a state measure of body image (BISS) and negative affect (NA). Participants were informed that due to the number of questions included, the packet would be split into two halves and that they would complete one packet, rate products and then complete another packet. Once participants completed the first packet they were escorted by the research assistant into a room with a computer, a mirror and three items to rate (watch, scarf and pair of sunglasses). Participants were left alone in the room and were instructed through the rating portion of the study via slides on a computer screen. The slides instructed participants to inspect the item, try it on and look in the mirror and see how it looks and feels on them. They were also instructed to evaluate the product as if they considered purchasing it. Participants were instructed to leave each item on while they rated each product on design, how the item fits their lifestyle, as well as overall appearance of the item. Participants were also asked to complete the following question

"to the extent that this product does not fit, is this a function of aspects of the *product* *or aspects of your* *body*?"

On the last page of the questionnaire packet, there were instructions for participants to remove all items and return to the researcher. The participants were then escorted into another room for a 10 -minute snack break and were informed that this was to reduce mental fatigue and also to show appreciation for their participation in the study. Participants were instructed that they may eat and drink as much as they like. The snack break served a dual purpose; while it provided participants with a break it also served as another component of the study as the amount of calories consumed was measured and used to represent a baseline measure of their eating habits. After the break, participants completed the second packet of questions and were scheduled for another session, at the same time of day, to complete the rest of the study.

On day two, participants were informed that the procedure of this session was similar than that of day 1 and that they would complete a packet of questions, rate products, receive a 10-minute snack break and then complete another packet of questions. Participants completed a questionnaire packet filled with filler items that coincide with the cover story (e.g. items that inquire about their online and in-store shopping habits and shopping preferences) as well measures of state body image (BISS) internalization of sociocultural standards of beauty (SATAQ) and feminist attitudes (CFIS-PA). Following, participants were escorted by the research assistant into a room with a computer, a mirror and the product and were left alone to rate the products. Participants were randomly assigned to rate one of two clothing items: a swimsuit or a

sweater. As outlined by Fredrickson et al. (1998), trying on a swimsuit and inspecting oneself in a mirror has been demonstrated to induce a state of self-objectification while trying on a sweater does not. Therefore, the sweater condition served as a control group. As on day 1, participants were left alone in the room and were instructed through the rating portion of the study via slides on a computer. The slides instructed participants to find their appropriate size of the clothing item, to inspect the item for design, wear the item, look at themselves in the mirror and evaluate the item and consider purchasing it. Participants were instructed to leave the clothing item on while they rated it on design, fit, overall appearance and purchasing desirability. Participants also completed the question *"to the extent that this product does not fit, is this a function of aspects of the product or aspects of your body*?" A measure of body shame was included and applied in the context of the task (BSS). Participants were not aware of the other condition (i.e. it was never mentioned, the clothing item of the other condition was not visible).

Once completed, participants were escorted into another room for a 10 -minute snack break and instructed to eat and drink as much as they like. After the break, participants completed the second packet of questions, which included state body image (BISS) and self-objectification (TST).

Data Analysis

Analyses were conducted using Statistical Package for the Social Sciences (SPSS for Mac Version 16.0, 2007). All statistical tests were considered significant at .05. Prior to analyses, data were examined for accuracy of entry and to ensure their appropriateness for statistical analysis. Assumptions tested include the normality of

sampling distributions, homogeneity of variance and, linearity of the relationship between covariates and dependent variables. An evaluation of assumptions of normality and homogeneity of variance yielded satisfactory results. Based on an examination of kurtosis and skewness, there was not much deviation from normality. Non- significant results of the Levene's Test on all dependent measures indicate that there appears to be homogeneity of variance.

The mediation analyses for hypotheses 7 -11 were conducted by using the product of coefficients test with asymmetric confidence intervals through the PRODCLIN program (Fritz & MacKinnon, 2007; MacKinnon, Fritz, Williams, & Lockwood, 2007). This program examines the product of the paths "a" (independent variable to mediator) and "b"(mediator to dependent variable controlling for independent variable) that comprise the indirect effect divided by the pooled estimate of their standard error and is less prone to some of the problems, such as an inflated Type I error, that arise in other common methods for testing mediation, such as the Sobel test (Sobel, 1982). A confidence interval for the effect size of the indirect path is generated by this program, and if the values between the upper and lower confidence limit do not include zero, this indicates a statistically significant mediation effect. A large simulation study by Fritz & MacKinnon (2007) that determined sample sizes needed for adequate power in tests of mediation found that the PRODCLIN test was able to detect mediation with a smaller sample size than the Baron and Kenny (1986) approach (Fritz & MacKinnon, 2007), thus making this method a more appropriate choice for the current study. The "a" and "b" pathways in this study were conducted in multiple regression analyses. Mediation

analyses were only conducted in the PRODCLIN program when the "a" and "b" pathways were significant. Unstandardized betas were reported for all regression analyses.

RESULTS

Descriptives

Descriptive statistics and *t*-tests were conducted to assess whether groups differed on BMI, age and trait self objectification. Additionally, descriptive statistics were conducted for all measures. The means and standard deviations for all measures are shown in Table 2.

Table 2. Descriptive Statistics- Means and Standard Deviations for All Measures

Measure	*N*	*M*	*SD*
BMI	100	22.96	4.76
Age	100	18.68	1.03
SOQ	101	.23	2.66
DRES	103	2.59	.95
EDI- Bulimia Subscale	103	13.68	4.89
EDE-Q- Global	99	1.86	1.06
EDE-Q – Restraint	103	1.78	1.35
EDE-Q Weight Concern	102	2.33	1.33
EDE-Q Shape Concern	101	2.42	1.27
SATAQ- I	99	28.93	9.92
Body Shame Composite	99	.01	1.95
PANAS – Negative Affect	100	16.91	5.62

Table 2. (continued)

Measure	*N*	*M*	*SD*
MSBRQ- Appearance Orientation	102	3.00	.42
MSBRQ – Body Areas Satisfaction	102	3.25	.73
Hunger Level Day 1- Baseline	102	4.95	1.34
Hunger Level Day 1- Post	103	5.43	1.06
Hunger Level Day 2- Baseline	98	4.92	1.08
Hunger Level Day 2- Post	91	5.40	.98
BISS Day 2 Pre	99	5.38	1.52
BISS Day 2 Post	94	5.36	1.44
Δ BISS (Day2 pre- Day 2 post)	94	.02	.56
Caloric Intake Day 1	93	161.05	116.02
Caloric Intake Day 2	93	179.61	108.02
Δ Caloric Intake (Day1-Day2)	98	-15.03	110.30
LFAIS scale score	99	236.48	22.31
CFIS- Physical Attractiveness	99	21.62	3.41

Note: SOQ = BMI = Body Mass Index; Self Objectification Questionnaire; DRES = Dutch Restraint Eating Scale; EDI- Bulimia = Bulimia subscale of the Eating Disorder Inventory; EDE-Q – Global Score = Global Score of the Eating Disorder Examination Questionnaire; EDE-Q – Restraint = Restraint subscale of the Eating Disorder Examination Questionnaire; EDE-Q – Weight Concern = Weight Concern subscale of the Eating Disorder Examination Questionnaire; EDE-Q – Shape Concern = Shape Concern subscale of the Eating Disorder Examination Questionnaire; SATAQ- I = Internalization General subscale of the Sociocultural Attitudes Towards Appearance Questionnaire ; PANAS-Negative Affect – Negative Affect scale of the Positive and Negative Affect Scale; MBSRQ- Appearance Orientation = Appearance Orientation scale of The Multidimensional Body-Self Relations Questionnaire; MBSRQ- Body Areas Satisfaction = Body Areas Satisfaction Scale of The Multidimensional Body-Self Relations Questionnaire ; BISS = Body Image State Scales; LFAIS- Scale = Scale Score of the Liberal Feminist Attitude and Ideology Scale; CFIS- Physical Attractiveness = The Physical Attractiveness Subscale of Composite Feminist Ideology Scales; TST= Twenty Statement Test.

Groups did not differ significantly on BMI [t (89) = 1.17, p = .24], age [t (89) = .90, p=. 37], SOQ scores [t (90) = 1.27, p= .21], or any other trait measures. However a t-test revealed a marginally significant difference between groups on BISS scores measured pre manipulation [t (91) = -1.97, p = .05, *MD*= .60]. The sample means for BMI, age and all measures are presented by condition on Table 3.

Hypothesis 1

To determine if trait self-objectification significantly predicts trait disordered eating symptomatology, simple regression analyses were conducted with trait self-objectification (SOQ) as the predictor variable and trait global disordered eating (EDE-Q Global), trait restraint eating (DRES), bulimic symptoms (EDI Bulimia Subscale), eating concern (EDE-Q Eating Concern), weight concern (EDE-Q Weight Concern), and shape concern (EDE-Q Shape), as the dependent variables. The overall regressions were significant and revealed that trait self-objectification (SOQ scores) significantly predicted Global disordered eating scores [b=.21, SE=.03 , t (97)= 5.88; p <.01], Restraint Eating scores [b=.20, SE= .03, t (100)= 6.53; p <.01], Bulimic symptoms [b=.47, SE= .18, t (100)= 2.61; p <.01], Eating Concern scores [b=.11, SE=.03 , t (98)= 12.08; p <.01], Weight Concern scores [b=.24, SE=.04 , t (100)= 19.58; p <.01], and Shape Concern scores [b=.20, SE=.04 , t (99)= 4.51; p <.01].

Table 3. Descriptive Statistics- Means and Standard Deviations for Baseline and Post Manipulation Scores by Condition

Variable	*Control (Sweater) (n= 49)*	*Experimental (Swimsuit) (n= 45)*
BMI	23.83 (4.35)	22.77 (4.25)
Mean Age	18.83 (.98)	18.64 (1.06)
SOQ	.63 (2.88)	-.08 (2.45)
DRES	2.77(.99)	2.46(.89)
EDI- Bulimia Subscale	14.24 (4.93)	12.73 (4.40)
EDE-Q- Global	1.98 (1.06)	1.83(1.11)
EDE-Q – Restraint	2.04 (1.38)	1.63(1.37)
EDE-Q Weight Concern	2.56(1.36)	2.24 (1.32)
EDE-Q Shape Concern	2.49 (1.22)	2.42 (1.40)
SATAQ- I	29.29(9.17)	28.29(10.84)
Body Shame Composite	-.55 (1.79)	.63 (1.96)
PANAS- Negative Affect	16.64(5.47)	16.91 (6.08)
MSBRQ- Appearance Orientation	3.22 (.26)	3.17(.27)
MSBRQ – Body Areas Satisfaction	3.18 (.68)	3.29(.80)
Hunger Level Day 1- baseline	4.82 (1.12)	5.05(1.41)
Hunger Level Day 1- post	5.37 (1.09)	5.42(.99)
Hunger Level Day 2- baseline	4.91 (1.00)	4.86(1.19)
Hunger Level Day 2- post	5.37 (.93)	5.33(.93)
BISS Day 2 Pre	5.02(1.60)	5.64(1.34)
BISS Day 2 Post	5.13(1.53)	5.50 (1.34)

Table 3. (continued)

Variable	*Control (Sweater) (n= 49)*	*Experimental (Swimsuit) (n= 45)*
Δ BISS (Day 2post- Day 2 pre)	.15(.43)	-.14(.60)
Caloric Intake Day 1	150.46(109.63)	169.14 (122.19)
Caloric Intake Day 2	179.07(110.48)	177.65(106.41)
ΔCaloric Intake (Day1-Day2)	-28.60 (123.89)	-8.51 (97.44)
LFAIS scale score	241.06(24.48)	232.64 (12.85)
CFIS- Physical Attractiveness	22.24(3.41)	21.32(3.35)

Note: SOQ = BMI = Body Mass Index; Self Objectification Questionnaire; DRES = Dutch Restraint Eating Scale; EDI- Bulimia = Bulimia subscale of the Eating Disorder Inventory; EDE-Q – Global Score = Global Score of the Eating Disorder Examination Questionnaire; EDE-Q – Restraint = Restraint subscale of the Eating Disorder Examination Questionnaire; EDE-Q – Weight Concern = Weight Concern subscale of the Eating Disorder Examination Questionnaire; EDE-Q – Shape Concern = Shape Concern subscale of the Eating Disorder Examination Questionnaire; SATAQ- I = Internalization General subscale of the Sociocultural Attitudes Towards Appearance Questionnaire ; PANAS-Negative Affect – Negative Affect scale of the Positive and Negative Affect Scale; MBSRQ- Appearance Orientation = Appearance Orientation scale of The Multidimensional Body-Self Relations Questionnaire; MBSRQ- Body Areas Satisfaction = Body Areas Satisfaction Scale of The Multidimensional Body-Self Relations Questionnaire ; BISS = Body Image State Scales; LFAIS- Scale = Scale Score of the Liberal Feminist Attitude and Ideology Scale; CFIS- Physical Attractiveness = The Physical Attractiveness Subscale of Composite Feminist Ideology Scales; TST= Twenty Statement Test.

Hypothesis 2

To assess for the effect of condition on state restricted eating, a 2 (condition: swimsuit vs. sweater) X 2 (day of caloric intake: day 1 vs. day 2) repeated measures analysis of variance (ANOVA) was conducted. Hunger levels for day 1 and day 2 before

caloric intake was entered as the covariate. Analyses for between-subject effects revealed that the effect of condition was not significant. However, analyses yielded a significant main effect for hunger level measured day 1 and a non- significant trend for hunger level for day 2 where participants who reported higher hunger levels consumed more calories than participants with lower hunger levels. The within-subjects effects analyses revealed that the effect for day of caloric intake, day of caloric intake by condition interaction, day of caloric intake by hunger level for day 1 interaction, and day by caloric intake by hunger level for day 2, were all not significant. Refer to Table 4 for a summary of the ANOVA results.

Table 4. ANOVA Summary for 2 (Condition: Swimsuit vs. Sweater) X 2 (Day of Caloric Intake: Day 1 vs. Day 2)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Subjects	87				
Condition	1	19340.93	19340.93	1.16	.28
Hunger Level Day 1	1	134342.92	134342.92	8.05	.006*
Hunger Level Day 2	1	50141.39	50141.39	3.00	.09
Error (between)	84	1400000.00	16683.58		
Within Subjects					
Day of Caloric Intake	1	2310.71	231.71	.36	.55
Day X Condition	1	7596.54	7596.54	1.19	.28
Day X Hunger Level Day 1	1	8323.53	8323.53	1.31	.26
Day X Hunger Level Day 2	1	14022.62	14022.62	2.20	.14
Error (within)	84	534264.90	6360.30		

Note. * = $p < .05$.

To assess for the effect of condition on state body image, another 2 (condition: swimsuit vs. sweater) X 2 (state body image: pre-manipulation vs. post-manipulation) repeated measures ANOVA was conducted. Trait self-objectification was entered as a covariate. Analyses for between-subject effects revealed that the effect of condition was not significant. However, analyses yielded a significant main effect for trait self-

objectification in which participants with higher levels of trait self-objectification reported less body image satisfaction. The within-subjects effect analyses revealed that state body image, and body image by trait self-objectification interaction were not significant. However, analyses indicated that body image by condition interaction was significant. A one sample *t*-test was also conducted separately on each condition to assess if the mean differences were significantly different from zero, and results indicated that participants in the sweater condition demonstrated an increase in body image satisfaction following the manipulation [$t(44) = 2.25$, $p < .05$, *MD*= .15] while participants in the swimsuit condition did not show a change in body image [$t(44) = -1.55$, p=13, *MD* = -.14]. Refer to Table 5 for a summary of the ANOVA results.

Table 5. ANOVA Summary for 2 (Condition: Swimsuit vs. Sweater) X 2 (Time of Body Image: Pre vs. Post manipulation)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Subjects					
Condition	1	6.42	6.42	1.74	.19
Trait Self-Objectification (SO)	1	34.39	34.39	9.34	.003*
Error (between)	84	309.41	3.68		
Within Subjects					
Time of BI Measurement	1	.001	.001	.005	.94
Time X Trait SO	1	.19	.19	1.41	.24
Time X Condition	1	.88	.88	6.53	.01*
Error (within)	84	11.28	.13		

Note. * = p< .05.

To assess for the effect of condition on body shame, a one-way ANOVA was computed with condition as the independent variable and body shame composite as the dependent variable. Results indicated there was a significant overall difference between conditions on body shame, [F (1,92)= 9.09, $p < .01$], where participants in the swimsuit condition [*M*= .63, *SD*=1.96] reported more body shame than participants in the sweater condition [*M*= -.55, *SD*= 1.79].

Hypothesis 3

To assess if the effect of condition on state restrained eating is moderated by internalization of CSB, a 2 (condition: swimsuit vs. sweater) X 2 (level of internalization of CSB: hi vs. low) X 2 (day of caloric intake: day 1 vs. day 2) repeated measures ANOVA was conducted. Although internalization was originally a continuous variable, it was spilt at the median to create high and low categories. A significant condition by internalization interaction would indicate a moderation effect. Analyses for between-subject tests revealed that the effects of condition and internalization were not significant. Within-subjects analyses revealed that day of caloric intake, day by condition interaction, day by internalization interaction, and the 3-way interaction of day by condition by internalization were all not significant. Refer to Table 6 for a summary of ANOVA results.

Table 6. Repeated Measures ANOVA Summary for 2 (Condition: Swimsuit vs. Sweater) X 2 (Internalization: Hi vs. Low Levels) X 2 (Day of Caloric Intake: Day 1 vs. Day 2)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Subjects					
Condition	1	222.85	2228.85	.12	.73
Internalization	1	24745.66	24747.66	1.31	.26
Condition X Internalization	1	16779.78	16779.78	.89	.35
Error (between)	88	1662000.00	18891.83		
Within Subjects					
Day of Caloric Intake	1	13924.06	13924.06	2.18	.14
Day X Condition	1	4557.19	4559.19	.71	.40
Day X Internalization	1	3183.86	3183.86	.50	.48
Day X Condition X Internalization	1	290.37	290.37	.05	.83
Error (within)	88	561403.89	6379.59		

Note. * = $p < .05$

To assess if the effect of condition on state body image is moderated by internalization of CSB, another 2 (condition: swimsuit vs. sweater) X 2 (level of internalization of CSB: high vs. low) X 2 (state body image: pre-manipulation vs. post-manipulation) repeated measures ANOVA was conducted. A significant condition by internalization interaction would indicate a moderation effect. Analyses for between-

subject effects yielded a marginal non-significant main effect for internalization of CSB where participants in the high internalization group (*M*= 4.98, *SD*= .22) reported marginally lower levels of body image satisfaction than participants in the low group (*M*= 5.48; *SD*= .20). However, the effect of condition, internalization and the internalization by condition interaction were not significant. The within-subjects analyses revealed that state body image, body image by internalization interaction, and the 3-way interaction of body image by condition by internalization were not significant. Like the previous repeated measures ANOVA, analyses indicated that body image by condition interaction was significant. Refer to Table 7 for a summary of the ANOVA results.

Table 7. ANOVA Summary for 2 (Condition: Swimsuit vs. Sweater) X 2 (Level of Internalization of CSB: Hi vs. Low) X 2 (Body Image: Pre vs. Post manipulation)

Source	*df*	*SS*	*MS*	*F*	*p*
Between Subjects					
Condition	1	10.66	10.66	2.72	.10
Internalization	1	15.39	15.39	3.93	.05
Condition X Internalization	1	.74	.74	.19	.66
Error (between)	84	328.66	3.91		
Within Subjects					
Time of BI Measurement	1	.00	.00	.001	.98
Time X Condition	1	.92	.92	6.66	.01*
Time X Internalization	1	.00	.00	.001	.97
Time X Condition X Internal	1	.01	.01	.10	.75
Error (within)	84	11.67	.14		

Note. * = p< .05

To assess if the effect of condition on body shame is moderated by internalization of CSB, a 2 (condition: swimsuit vs. sweater) X 2 (level of internalization of CSB: high vs. low) ANOVA was conducted on body shame. Results indicated there were significant main effects for condition [F (1,89)= 10.13, p< .01] and internalization [F (1,89)= 14.23, p< .01]. As previously reported, participants in the swimsuit condition reported more body shame (*M*= .63; *SD*=1.96) than participants in the sweater condition

(M= -.55; SD= 1.79). Also, participants with high levels of internalization reported significantly more body shame (M= .79; SD= 2.04) than participants with low levels of internalization (M= -.61, SD= 1.66). Results for the condition by internalization interaction were non-significant [F (1,89)= .56, p=.46].

Hypothesis 4

To determine if the effect of the condition on caloric intake is moderated by trait self-objectification, a 2 (condition: swimsuit vs. sweater) X 2 (level of trait self-objectification: high vs. low) X 2 (day of caloric intake: day 1 vs. day 2) repeated measures ANOVA was conducted. Between-subject analyses indicated that the level of trait self-objectification effect [F (1,86)= .62, p=.43] and the level of trait self-objectification by condition interaction [F (1,86)= .35 p=.55] were not significant. The within-subjects analyses revealed that day of caloric intake by level of trait self-objectification interaction [F (1,86)= 2.4, p=.12], and the 3-way interaction of time by condition by level of trait self-objectification were also not significant [F (1,86)= .00, p= .95].

To assess if the effect of condition on state body image is moderated by trait self-objectification, another 2 (condition: swimsuit vs. sweater) X 2 (level of trait self-objectification: hi vs. low) X 2 (state body image: pre-manipulation vs. post-manipulation) repeated measures ANOVA was conducted. Analyses for between-subject effects yielded a significant main effect for trait self-objectification [F (1,83)= 15.24, p< .01] in which participants in the with high levels of trait self-objectification reported lower levels of body image satisfaction (M= 4.73, SD= .20) than participants

with low levels of trait self-objectification (*M*= 5.84, *SD*= .20). The trait self-objectification by condition interaction was not significant [F (1,83)= 1.48, p=.35]. The within-subjects analyses revealed that the body image by trait self-objectification interaction [F (1,83)= 68, p=.41], and the 3-way interaction of body image by condition by trait self-objectification were not significant [F (1,83)= 1.00, p= .32]. However, analyses indicated the body image by condition interaction was significant.

To assess if the effect of condition on body shame is moderated by trait self-objectification, a 2 (condition: swimsuit vs. sweater) X 2 (level of self-objectification: high vs. low) ANOVA was conducted on body shame. Results indicated there were significant main effects for condition [F (1,87)= 16.22, p< .01] and trait self-objectification [F (1,87)= 23.19, p< .01] and a significant condition by trait self-objectification interaction [F (1,87)= 8.46, p< .01]. Participants with high levels of trait self-objectification reported significantly more body shame (*M*= 1.01, *SD*= .25) than participants with low levels of trait self-objectification (*M*= -.67, *SD*= .25). Tukey posthoc analyses determined that the participants in the swimsuit condition with high trait self-objectification levels reported significantly more body shame (*M*= 2.21, *SD*=.39) than the other three groups: high trait self-objectification in the sweater condition (*M*= -.20, *SD*= .32), low levels of trait self-objectification in the swimsuit condition (*M*=-.47, *SD*= . 32) and low in trait self-objectification in the sweater condition (*M*= -.86, *SD*=.36). These three groups did not significantly differ from each other.

Hypothesis 5

To determine if the effect of condition on caloric intake is moderated by feminist attitudes, a 2 (condition: swimsuit vs. sweater) X 2 (level of feminist attitudes: low vs. high) X 2 (day of caloric intake: day 1 vs. day 2) repeated measures ANOVA was conducted. Between-subject analyses indicated that the effect of feminist attitudes [F (1,88)= .15, p= .69] and the level of feminist attitudes by condition interaction were not significant [F (1,88)= .00 p= .96]. The within-subjects analyses revealed that day of caloric intake by level of feminist attitudes interaction [F (1,88)= .31, p= .58], and the 3-way interaction of time by condition level of feminist attitudes were also not significant [F (1,88)= .09, p= .76].

To determine if the effect of the condition on body image satisfaction is moderated by feminist attitudes, a 2 (condition: swimsuit vs. sweater) X 2 (level of feminist attitudes: low vs. high) X 2 (state body image: pre-manipulation vs. post-manipulation) repeated measures ANOVA was conducted. Analyses for between-subject effects indicated that the feminist attitudes main effect [F (1,84)= 2.20, p= .14] and the level of feminist attitudes by condition interaction were not significant [F (1,84)= .00 p= .99]. The within-subjects analyses revealed that the body image by level of feminist attitudes interaction [F (1,84)= .78, p= .38], and the 3-way interaction of body image by condition level of feminist attitudes were also not significant [F (1,84)= .02, p= .88].

To assess if the effect of condition on body shame is moderated by feminist attitudes, a 2 (condition: swimsuit vs. sweater) X 2 (level of feminist attitudes: high vs.

low) ANOVA was conducted on body shame. Results indicated there were significant main effects for condition [F (1,89)= 10.61, p< .01] but a marginal non-significant main effect for the level of feminist attitudes [F (1,89)= 3.41, p=.07] in which participants with low levels of feminist attitudes endorsed more body shame (M= .26, SD= 1.93) than participants with high levels of feminist attitudes (M= -.27, SD= 1.96). The condition by level of feminist attitudes interaction was not significant [F (1,89)= .00, p=. 99].

Hypothesis 6

To assess if composite feminist attitudes and specific feminist attitudes about physical appearance predict trait disordered eating and trait body image, simple regression analyses were conducted with composite feminist scores (LFAIS composite) and feminist attitudes about physical appearance (CFIS-PA subscale) scores entered as predictor variables. Both of the feminist attitude scores were centered before including them in the analyses. EDE-Q Global scores and MBSRQ- BAS scores were entered separately as dependent variables. CFIS-PA scores [b=-.01, SE=.03 , t (95)= -.20; p =*.84*] and LFAIS composite score [b=.00, SE= .00, t (95)= .35; p=.72] did not predict EDE-Q Global scores. When MBSRQ- BAS scores were entered as the dependent variable, the CFIS-PA subscale scores was not significant [b=-.02, SE=.02 , t (97)= -.89; p =.37] while the equation for LFAIS composite score was significant [b=-.01, SE=.00 , t (97)= -2.46], suggesting that the overall feminist composite scores were predictive of trait levels of body dissatisfaction.

Hypothesis 7

To test for mediation of trait self-objectification and body dissatisfaction through internalization of CSB, regression coefficients were computed for path “a” and path “b” using regression analyses. Trait self-objectification significantly predicted internalization of CSB [b= 1.43, SE=.35, t (96) = 6.53, $p < .01$]. Also, Internalization significantly predicted body dissatisfaction when controlling for trait self-objectification [b= -.03, SE=.01 t (95) = -3.41, $p < .01$]. The 95% confidence interval was −.0694 to −.0124 and did not include zero, this indicates a statistically significant mediation effect.

Hypothesis 8

To test for mediation of body dissatisfaction and bulimic symptomatology through restrained eating, regression coefficients were computed for path “a” and path “b” using regression analyses. Body dissatisfaction significantly predicted restrained eating [b= -.61, SE=.12, t(101) = -5.26, $p < .01$]. Also, restrained eating predicted bulimic symptoms when controlling for body dissatisfaction [b= 1.71, SE=.51, t (101) = -3.36, $p < .01$]. The 95% confidence interval was −1.8314 to −.3975 and did not include zero, this indicates a statistically significant mediation effect.

Hypothesis 9

To test for mediation of body dissatisfaction and bulimic symptomatology through negative affect, regression coefficients were computed for path “a” and path “b” using regression analyses. Body dissatisfaction significantly predicted negative affect [b= -2.41, SE=.75, t(98) = -3.22, $p < .05$]. Also, negative affect predicted bulimic symptoms when controlling for body dissatisfaction [b= .20, SE=.08, t (98) = 2.40, p <

.05]. The 95% confidence interval was −1.0453 to −.0078 and did not include zero, this indicates a statistically significant mediation effect.

Hypothesis 10

To test for mediation of body dissatisfaction and bulimic symptomatology through body shame, regression coefficients were computed for path "a" and path "b" using regression analyses. Body dissatisfaction significantly predicted body shame [b= -1.71, SE=.21, $t(97) = -8.92$, $p < .01$]. However, body shame did not significantly predict bulimic symptoms when controlling for body dissatisfaction [b= .44, SE=.30, $t\,(97) = 1.46$, $p = .15$] The 95% confidence interval was −1.8123 to .2477 and includes zero, which also indicates that a mediation effect may not exist.

Hypothesis 11

To test for mediation of internalization of CSB and bulimic symptomatology through body shame, regression coefficients were computed for path "a" and path "b" using regression analyses. Internalization of CSB significantly predicted body shame [b= .09, SE=.02, $t(98) = 5.16$, $p < .01$]. Also, body shame predicted bulimic symptoms when controlling for internalization [b= .61, SE=.26, $t\,(98) = 2.38$, $p < .05$]. The 95% confidence interval was .0096 to .1096 and did not include zero, this indicates a statistically significant mediation effect. Refer to Figure 6 for a diagram integrating results for hypotheses 7-11.

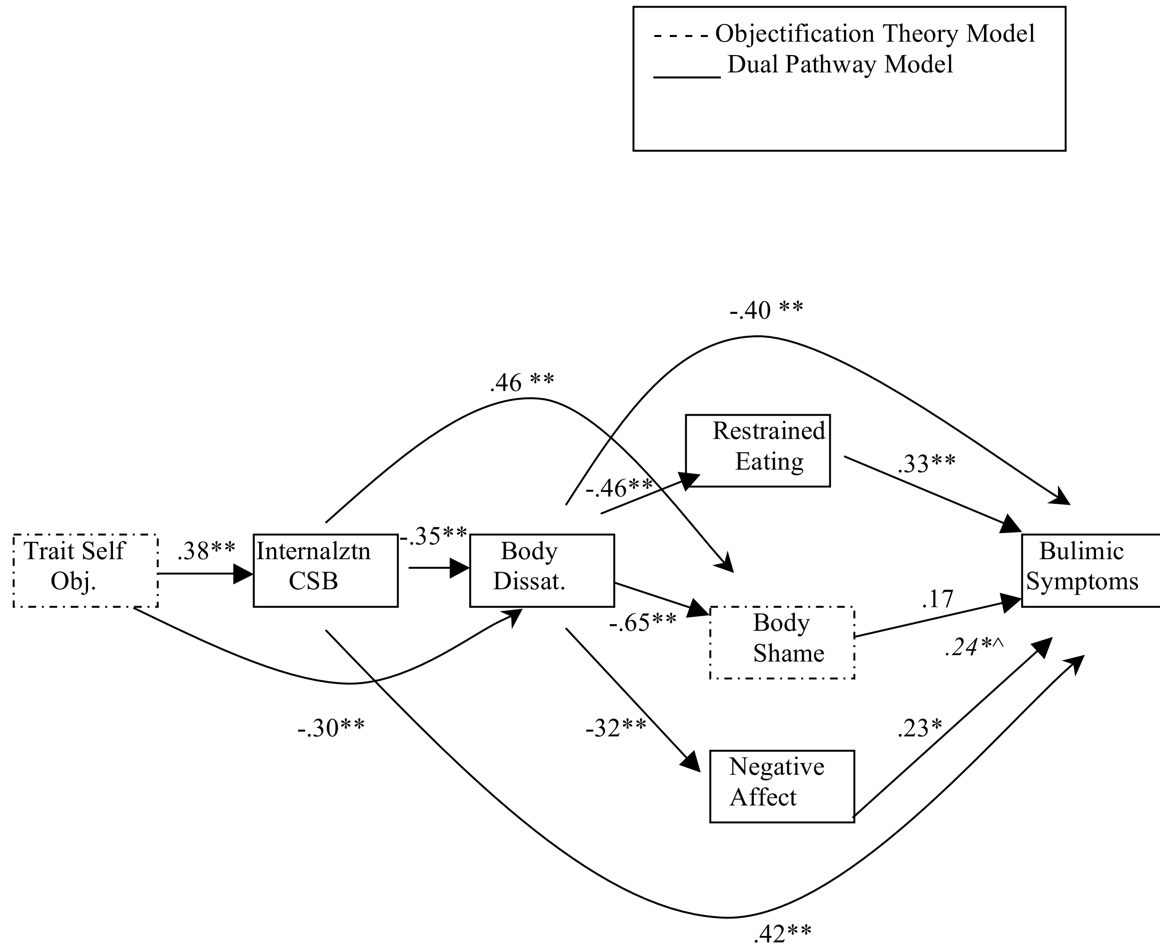

Figure 6. Model with Standardized Path Coefficients and Significance Levels.
Notes: All analyses were conducted as pairwise tests. * p<.05, **p<.01.^ indirect effect of body shame to bulimic symptoms through internalization

CONCLUSIONS

The current study had three main objectives: to examine the relation between trait and state self-objectification and various eating pathology, including restricted eating; to examine the role of general and specific feminist attitudes on body dissatisfaction and trait disordered eating; and to merge two empirically supported models of eating disorders.

In regards to the primary hypothesis, it was expected that trait self-objectification would significantly predict disordered eating. Results were supportive: In this sample, individuals who reported higher trait self-objectification levels expressed more disordered eating pathology across a wide range of symptoms. These findings have preventative and treatment implications. First, these findings are consistent with eating disorder literature that demonstrates that individuals who place a strong emphasis on their physical appearance may be more susceptible to disordered eating pathology (e.g. Goldfein, Walsh, & Midlarsky, 2000; Wilfley, Schwartz, Spurrell, & Fairburn, 2000). Second, these findings support the utility of treatments that include exposure to combat fears that individuals with eating disorders may have regarding an imperfect appearance (Delinsky & Wilson, 2006; Key, George, Beattie, Stammers, Lacey, & Waller, 2002; Tuschen-Caffier, Pook,& Frank, 2001). Findings support trait self-objectification as a proximal and distal risk factor for eating disorder symptoms and suggest that trait self-objectification may be an important factor to target in preventing eating disorders. By targeting an individual's evaluation of herself and encouraging a more well-rounded value assignment of individual characteristics, in addition to other factors related to

disordered eating, we may be able to reduce the severity or prevalence of disordered eating. Future research developing and evaluating the efficacy of prevention programs should assess and target trait self-objectification.

In accordance with the state self-objectification literature, it was expected that having women evaluate themselves in a swimsuit (versus a sweater) would induce a state of self-objectification and lead to an increase in body shame, body dissatisfaction and restricted eating. As expected, participants in the swimsuit condition reported more body shame than participants in the control condition and the effect of condition was moderated by trait self-objectification. Specifically, other research has shown that participants with high levels of trait self-objectification who are exposed to situations which illicit a state of self-objectification are more likely to experience body shame than individuals with low trait levels. However, in this study, we were unable to document these effects for state body image and restricted eating, which we suspect is due to the limitations of this study. In this study the change in amount of calories consumed during the snack break was used as a measure of state restricted eating. While this would account for whether participants consumed more or less calories following the manipulation, it does not assess for type of food (versus calories). Perhaps ascertaining the type of food eaten, specifically fat content (i.e. high fat vs. low fat) would produce significant findings. It is possible that further examination of the type of food eaten (i.e., high vs. low fat) would indicate an effect of condition. Further research is needed to assess whether the food type moderates the effect of state self-objectification on caloric intake.

Additionally, the ability to document the effects of the manipulation on state self-objectification and state body image may have been hindered due to the timing of the post manipulation administration. Participants were given a 10-minute snack break prior to completing the state self-objectification and post manipulation body image measures. Given the previous literature confirming the effectiveness of the swimsuit manipulation, as well as supportive results for an increase in body shame amongst participants in the swimsuit condition, we conclude that a state of self-objectification was induced but either did not linger past the snack break or the snack break itself interrupted the induced self-objectification experience. In this context, the non-significant results for the condition on body image are not surprising; however, the other finding that participants in the sweater condition had an increase in body satisfaction was not predicted. Further analysis of the procedure may provide some explanation for these results. Following the manipulation, all participants were asked whether the article of clothing fit and if not, whether the lack of fit was a function of the clothing item or function of their body. Participants in the sweater condition more often reported that that the lack of fit was a result of the clothing item (sweater) while the participants in the swimsuit condition more often reported that it was a result of their body. This question may have led to an increase in body satisfaction of the control condition that has not been documented in previous literature. However, further research is needed to understand why the effect for the control group may have lingered past the snack break while an effect for the swimsuit condition was not found. Future research should also address the lingering

effects of state self-objectification as well as potential experiences or activities that may potentially interrupt a self-objectifying experience.

This study was also interested in further examining the relationship between feminist attitudes and body dissatisfaction and disordered eating symptomatology by replicating findings that feminist attitudes about physical appearance may provide additive predictive value to composite feminist attitudes (Dionne et al., 1995). Results were mixed. While feminist attitudes about physical appearance was not predictive of disordered eating and body dissatisfaction, a composite of feminist attitudes was found to be a significant predictor of body dissatisfaction, although not for global disordered eating concerns. In other words, women who experienced higher levels of feminist attitudes were less likely to be dissatisfied with their bodies but not less likely to develop disordered eating symptoms. Thus, while feminist attitudes may protect women from feeling badly about their bodies, feminist attitudes may not be strong enough protective factors to protect from other pathways that may lead to eating pathology. This study was unable to determine the aspects of feminist attitudes that may have protective value, we suspect, partly due to poor internal consistency (Cronbach's alpha = .50) of the attitudes about physical attractiveness measure. Further analysis of the scale suggests that some of the scale items may not have been appropriate given the theoretical conceptualization of eating disorder development. In this measure, items often linked women's physical attractiveness to their relationships with men (i.e., "women should take the time to be attractive for men"; " a woman should be careful of how she looks because it influences what people think of her husband"); however, disordered eating is not typically

motivated by women's relationships with men but rather, other social benefits of meeting the cultural standard of beauty (i.e., attaining higher social status, social acceptance).

Finally, this study was interested in merging Stice's dual pathway model with objectification theory by including trait self-objectification and body shame in the model. Results supported previous empirical literature of the dual pathway model (Shepard & Ricciardelli, 1998; Stice, Shaw Nemeroff, 1998) and found that both negative affect and restricted eating mediated the relationship between body dissatisfaction and bulimic symptomatology. It was also found that internalization mediated the relationship between trait self-objectification and body dissatisfaction. In other words, self-objectification was related to higher levels of internalization, which in turn was then related to more body dissatisfaction. Thus, the adverse effects of trait self -objectification on body dissatisfaction may work through internalization. Given that both self-objectification and internalization are often a result of sociocultural pressures, prevention programs that encourage individuals to challenge cultural messages will be essential. It would be particularly important that these programs focus on the subtle nature of these messages and the various channels through which these messages are communicated (i.e., family, peers and media). Because messages received through social interactions are often overlooked and may be perceived as benign, prevention efforts should encourage individuals to consider how these interactions affect the way they perceive themselves and the value they place on physical appearance. Likewise, individuals may benefit from considering how they contribute to communicating these

hazardous messages to others. Finally, levels of self-objectification and internalization may be used to identify populations that are at risk for developing eating disorders.

Although the findings of the present study contribute to advancing research and practice related to eating disorders, several limitations must be considered. While this study was novel in creating an experimental component to self-objectification, the timing of our measurement of state body image limited our ability to document any potential effects of the manipulation on this variable. Also, we used a new scoring system for the trait self-objectification measure due to participation error. Although our preliminary analyses indicate that our new scoring system yielded scores comparable to the old system, more thorough investigation is needed. As mentioned earlier, the low internal consistency of the feminist attitudes about physical appearance measure in our sample prevented us from making solid conclusions regarding results for this variable. Additionally, our sample consisted of young college students, mostly Caucasian, from the Southwest which limits the generalizability of our findings to other populations that have been noted as being vulnerable to self-objectification and disordered eating, such as older or middle aged women (i.e., Hetherrington & Burnett, 1994; Tiggemann & Stevens, 1999). While the sample used in this study has been considered a high risk population for poor body image and disordered eating behaviors (Zuckerman, Colby, Ware & Lazerson, 1986), it is plausible that the result patterns found in this study may not generalize to samples varying in age, and ethnicity. Thus, it is important that future studies replicate these findings with various populations. Due to sample limitations, more sophisticated analyses such as path analysis or structured equation modeling could

not be used to test the goodness of fit of the proposed model. Although mediational analyses were conducted, this was on cross-sectional data that cannot address causality. Future research should consider collecting data on a larger sample size that is an experimental or prospective study.

The present study adds to the accumulating body of research that has tested facets of objectification theory as they relate to eating disorder symptomatology and adds to the broader literature on eating disorders. The current study replicated previous research in self-objectification and also extends prior research by testing a more comprehensive framework that incorporated trait self -objectification and body shame into the dual pathway model. Having a more comprehensive framework from which to understand the development and maintenance of eating disorders is valuable in prevention and treatment efforts as gaining a better understanding of how intrapersonal and contextual variables from various models affect each other allows for more focused intervention and prevention efforts. Likewise, this study addressed feminist attitudes as a protective factor in eating disorder development. Additional research is needed to replicate these findings and extend them to broader populations as well as to continue to explore additional protective factors and intrapersonal and contextual factors that influence the development and maintenance of eating disorders in women.

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Publications

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Presentations

Warren, C.S., Gleaves, D. H., Clarke, A., & Bays, S. (November, 2006) *Race, Attractiveness, and Thinness: The Moderating Effect of Ethnicity*. Poster presented at the annual Association for Behavioral and Cognitive Therapies Annual Convention, Chicago, IL.

Clarke, A., & Perez, M. (2006, June) Preliminary findings on the Internalization if Sexual Objectification and it's Consequences in Body Image and Social Interaction. Poster presented at the annual Academy of Eating Disorders International Conference. Barcelona, Spain.

Hopwood, C.J., Clarke,A. & Perez M. (2006, May) Interpersonal Problems and Eating Disorder Constructs. Poster presented at the annual Society for Interpersonal Theory and Research (SITAR), Philadelphia, PA.

Clarke, A., & Perez, M. (2005, October) Interpersonal Functioning, Emotional Suppression, and Disordered Eating. Poster presented to the Psychology Department, Texas A&M University, College Station, TX.