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THE THIN IDEAL: THE ROLE OF POSITIVE AND NEGATIVE EXPECTANCIES

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THE THIN IDEAL: THE ROLE OF POSITIVE AND NEGATIVE EXPECTANCIES

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I dedicate this thesis to my

husband and parents

for their love and support

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Abstract

Media often portrays women of an unattainable stature. This unattainable stature is commonly referred to as the *thin ideal*. Women in media, especially fashion models, have become significantly thinner over the last several decades resulting in a widening body image discrepancy. Varieties of variables have been examined to understand body image incongruency. Steinberg (2004) developed the Thinness Expectancy Questionnaire and was the first to apply expectancy theory to body image research. The current study examined expectations and sociocultural attitudes of thinness in relation to Body Mass Index and body size of fashion models and found that women exposed to thin ideal images reported greater negative expectations of thinness. Specifically, females who viewed advertisements portraying thin models reported significantly greater negative expectations (M = 3.17, SD = .79) than females who viewed advertisements portraying average sized models (M = 2.54, SD = .86).

Keywords: thin ideal, body image, eating disorder, eating pathology, thinness, expectations

The Thin Ideal: The Role of Positive and Negative Expectancies

The common view of anorexia nervosa is that of a pathological disorder in which an individual restricts food intake resulting in severe weight loss. For decades, clinicians and researchers have searched for the cause of food restriction. Current theories on the development and cause of anorexia nervosa contend that there is a strong correlation between the onset of the disorder and sexual abuse (Weaver & Byers, 2006), low self-esteem (Park, 2005; Bessenoff, 2006), a sense of no-control, and perfectionistic parents (MacBrayer, Smith, McCarthy, Demos, & Simmons, 2001). To understand pathology that is as complex as anorexia nervosa, researchers and clinicians must take a holistic and systematic approach. To begin such an approach, researchers and clinicians must first begin to understand the evolutionary function and reasonable adaptation for such pathologies.

General standards of beauty have not evolved much since the human species began. A human face that has clarity, and is symmetrical, is beautiful. However, while the standards of beauty—clarity, symmetry, harmony, vivid color—have not evolved, the standards of body type have evolved alongside the *Zeitgeist* (Etcoff, 1999). During the renaissance era, women were portrayed as voluptuous and curvaceous; with the popularity of modern models (e.g., Twiggy), women are now shown as thin. This has given rise to the "thin ideal", the *what is beautiful is good* stereotype, and an upward social comparison of thinness. Due to such ideals, young girls are now starving themselves in order to adapt to the evolution of the female image.

Current research in eating pathology and body image distortion has primarily focused on biological and sociocultural factors. Although these factors cannot be ignored,

the functional and adaptive role that eating pathologies, specifically anorexia nervosa, serve to benefit the individual needs further understanding. At first glance, the development of anorexia nervosa seems paradoxical. It is counter-intuitive to think of starvation and cessation of menarche as adaptive since there is a decline in reproductive success. Although anorexia nervosa may not result in reproductive success, it may lead to other adaptations: competitions and comparisons (Faer, Hendriks, Abed, & Figueredo, 2005), status and control (Gatward, 2007), a reduction in the positive-incentive of food (Pinel, Assanand, & Lehman, 2000), and the reactivation of an old adaptive response to famine (Gatward, 2001; Guisinger, 2003; Gatward, 2007).

The Evolutionary Perspective

From an evolutionary perspective, anorexia nervosa is a contradiction in terms of its adaptive function. In a society of cheap and plentiful food, it is not adaptive for an individual to starve. Recently, researchers have begun to explore this evolutionary paradox. Three theories have arisen. The first is that anorexia nervosa developed out of an adaptation of competition for mates and status (Faer et al., 2005; Gatward, 2007). Second, that individuals suffering from anorexia nervosa have developed a decrease in the positive-incentive value of food (Pinel, Assanand, & Lehman, 2000). The third, and final theory, is that anorexia nervosa is an evolved adaptive mechanism that facilitated migration during times of famine (Gatward, 2001; Guisinger, 2003; Gatward, 2007).

Comparisons. Humans are social animals, but being a social animal comes with advantages and disadvantages: it gives protection but leads to competition (Gatward, 2007). Typically, individuals assess their value by comparing themselves to the group. With overcrowded cities and the influence of mass media, women are comparing

themselves, not just to their tribe, but to everyone they see in person, print, or film. Such over-comparisons, and comparisons to extreme models, can be detrimental to one's self-esteem, body image, and overall psychological state. With comparison between individuals, competition is soon to follow. Once individuals begin to compare their body type to others, a competition is logical to ensue for the fittest and most desirable body type. Now that comparisons have widened the audience, so too has competition. Individuals are now comparing and competing, not against their tribe, but against everyone that they meet and see.

Competition for mates and status. Two forms of competition arise among females. The first is female intrasexual competition (ISC). The ISC suggests anorexia is a manifestation of reproductive suppression of subordinate females by the dominant females. The second is the sexual competition hypothesis (SCH). The SCH suggests that anorexia, bulimia, and the pursuit of thinness stem from the process of female ISC and Darwinian Theory of sexual selection (Faer et al., 2005). Although the two processes have their own role, Faer and colleagues (2005) suggest the following interaction:

> A major element in the process of ISC in females involves the display of cues of physical attractiveness involving mainly signs of youth and good health. The SCH contends that a number of factors have arisen in Western societies that have influenced and intensified female ISC. (p. 399)

Based upon the roles of ISC and SCH, Faer and colleagues (2005) conducted a large survey on undergraduate women. Various questionnaires were given, including the Female Competition for Mates Scale, the Female Competition for Status Scale, the

General Competitiveness Scale, the Eating Disorders Inventory, the Eating Attitudes Test, and two forms of the Mate Value Inventory (Personal mate value and Ideal mate value). From this battery of questionnaires, the researchers assessed perfectionism, drive for thinness, and competitiveness, among others. From their study, Faer and colleagues (2005) found support for the contention that ISC for mates positively influences body dissatisfaction and one's drive for thinness. These two factors can in turn contribute to both anorexia and bulimia. They also found that a high ISC for mates positively influences high ISC for status, competitiveness, and perfectionism. These factors are contributive to anorexia nervosa. These findings lend support that eating disorders, specifically anorexia nervosa, originate from female ISC for mates.

Taking a historical perspective, the shift in status as it relates to weight traces back to the shift toward agriculture. With the invention of agriculture, there was a shift from egalitarian structure to hierarchical systems, food could be stored outside of the body, and only individuals at the top of the hierarchy had access to the abundance of food. It was then that body size became a function of status. At the start, only the wealthy could afford to be obese; thinness was a sign of poverty and low status (Gatward, 2001). However, over the last century these roles have reversed since food is now abundantly available and relatively cheap. Resisting cheap, abundant food has become a sign of status and self-control. "Dietary restriction, made evident by weight loss, is thus an attempt to demonstrate status and control" (Gatward, 2007, p. 4) thus providing a motivation to starve.

Positive-incentive theory of hunger. Set-point theories presume that set-point negative feedback mechanisms have evolved to maintain the body's internal environment

at levels that promote good health and survival in the face of environmental changes (Pinel, Assanand, & Lehman, 2000). Set-point regulation of food intake theorizes that motivation to eat (i.e., hunger) is triggered by energy resources falling below the set-point level; satiety is triggered by energy resources equal to or above the set-point level. A flaw with this theory is the apparent individuality and fluctuation of set-point levels, leaving researchers with problematic measurement.

In reply to set-point theories, it is argued that humans are not motivated to eat because of declining energy resources; rather, humans are "drawn to eat by the anticipated pleasure of eating (i.e., by food's positive-incentive value)" (Pinel et al., 2000, p. 1109). The types of foods chosen for consumption indicate the positive-incentive value of food. The human species have evolved a taste for fats and sugar—they taste good and they provide our bodies with energy. Pinel and colleagues (2000) have applied the positive-incentive theory to understanding the etiology and development of anorexia nervosa. They suggest that the decline in eating, which is characteristic of anorexia, is a consequence of a decline in the positive-incentive value. However, a second characteristic of anorexia is a preoccupation with food. Due to this preoccupation, the applicability of the positive-incentive theory is flawed. According to the positive-incentive theory, a preoccupation with food would indicate a high positive-incentive value. Although patients suffering from anorexia refrain from eating, there is a common tendency to think about food, cook food, collect recipes, and feed others. Therefore, there may be a difference between the positive-incentive value of food interaction and the positive-incentive value of actually eating food (Pinel et al., 2000). For an individual with

anorexia, the act of eating food may have a low positive-incentive value while food itself may have a high positive-incentive value.

Adaptive response to famine. The Adapted to Flee Famine Hypothesis (AFFH) is the most prominent evolutionary theory of anorexia nervosa. According to the AFFH, the symptoms of anorexia nervosa—food restriction, hyperactivity, and denial of starvation—are reflections of an adaptive mechanism that once facilitated migration in response to local famine (Guisinger, 2003). As previously mentioned, food situations are very different today compared to most of human history (i.e., hunter-gatherer and nomadic societies as opposed to today's agriculture and processing plants). Before food was cultivated and stored, humans were nomadic foragers. As described by Guisinger (2003), when food depletion resulted in extreme weight loss, and individuals had to migrate in order to find food elsewhere, to migrate efficiently, individuals would need to turn off starvation. "The ability to stop foraging locally, to feel restless and energetic, and optimistically to deny that one is dangerously thin could facilitate such a last ditch effort" (Guisinger, 2003, p. 748). The turning-off of a starvation mechanism, as described by Guisinger (2003), parallels symptoms of anorexia nervosa to the point that their resemblance cannot be denied. It is theorized that now, when individuals with this genetic susceptibility do lose weight, this ancient adaptation of fleeing famine is triggered (Guisinger, 2003).

Although the evolutionary perspective provides answers to which other models cannot, this perspective still leaves many questions regarding anorexia nervosa unanswered. If anorexia nervosa was an adaptation to flee famine, it fails to account for the higher rates of anorexia in females. There is no reason why males would fail to show

an increase in competitiveness and an adaptation to cope with famine. Furthermore, the adaptation to flee famine hypothesis, along with the other evolutionary based theories, do not explain why the onset of anorexia usually occurs during adolescence.

A "Thindemic"

For centuries, women have turned towards external stimuli for how they should behave and present themselves. Specifically women have focused their attention toward print media, namely fashion magazines, as the expert for gender role schemas. "For each year between 1950 and 1999, an average of more than 5,500,000 women have subscribed to the top four fashion magazines" (Sypeck, Gray, & Ahrens, 2004, p. 343). The number of women viewing magazines is even higher when you take into consideration those who buy over the counter or borrow from friends.

Some women and young girls may view fashion magazines as an instruction manual or guide for how young women ought to dress, behave, and appear. However, such media often portrays women of an unattainable stature. This unattainable stature, commonly referred to as the *thin ideal*, is becoming an epidemic. Women often portrayed in the media are typically 23% below the average weight of women (Steinberg, 2004), representing an unrealistic standard of thinness. In addition, models and other women in media have become significantly thinner over the last several decades, which results in an increase in the discrepancy for the average woman thus making the ideal body even more difficult to attain (Hawkins, Richards, Granley, & Stein, 2004). The connection between body dissatisfaction and media exposure has been well-established (Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Park, 2005; Hawkins et al, 2004; Evans, 2003; Halliwell & Dittmar, 2004; Dittmar & Howard, 2004; Bessenoff, 2006; Engeln-Maddox, 2005;

Weddell & Santoyo, 2005). With the continuing trend of thinner models and unrealistic standards, body dissatisfaction among women will continue to grow. The incongruency that the average woman experiences while viewing the ultra thin models in today's fashion magazines and evaluation of her own body, and the self-image that results, will continue to widen.

A Web of Variables

Body image research is vast and there are many variables affecting body dissatisfaction that lead to eating pathology. The reasoning for such a high number of factors that may lead to eating pathology is the fact that eating pathology—both restrictive and purging styles—includes a complex interaction between biological, familial, social, and individual-intrinsic variables. An overview of the most prominent variables is essential for understanding the direction of the current topic: expectations of thinness. Self-discrepancy, Body Mass Index (BMI), upward social comparison, and internalization of the thin ideal are variables that may relate to body dissatisfaction. Predictors of body dissatisfaction, commonly discussed independently of one another, are best discussed, and viewed, as interrelated.

Internalization and self-discrepancy. Bessenoff (2006) conceptualized thin ideal internalization as "acceptance of or overt agreement with social standards of thinness" (p. 239). Social comparison theory states that we seek to compare ourselves to others in order to determine our own level of abilities and self-discrepancies arise when representations in the self-concept falls short of an important standard (Bessenoff, 2006). From this research, Bessenoff (2006) concluded whether or not women felt better or worse after viewing advertisements portraying the thin ideal was dependent on their own

personal level of self-discrepancy. Specifically, women exposed to thin ideal advertisements with high levels of body image self-discrepancy showed higher levels of unhappiness, agitation and depression, and lowered self-esteem. Those women who displayed low levels of self-discrepancy did not show these affects (Bessenoff, 2006). This correlation provides evidence that the more women are self-discrepant about their own body image, the more negative attributions, and negative feelings they will have toward themselves. Similarly, Wedell and Santoyo (2003) concluded that women will negatively evaluate themselves to the degree that their own body features deviate from a socially constructed ideal. However, it is when women utilize the thin ideal, as a self-evaluation tool, that results in an internalized negative self-image. Therefore, the more internalization of the thin ideal the greater one's self image becomes negative. From these two studies, it is obvious to see the interrelation of the variables that contribute to body image dissatisfaction. The degree that each variable contributes to body dissatisfaction, and thus eating pathology, is relative to each individual based upon that individual's internalization of the thin ideal and their own perceived body discrepancy from that of the body ideal.

Self-discrepancy and body mass index. In terms of body image, self-discrepancy will increase as one's weight further deviates from society's ideal. In today's American society, the body ideal for a woman is that of a thin and toned physique. Therefore, the greater one's weight the higher self-discrepancy one may exhibit. Body Mass Index (BMI) is widely used in body image research. Brown and Dittmar (2005) found that BMI systematically relates to women's weight-focused anxiety. The significant association between BMI and weight-focused anxiety shows that heavier women report more anxiety

about weight-related body sites than lighter women. Similarly, Steinberg (2004) concluded that BMI has an influence on body dissatisfaction. Hence, the heavier a woman is the more anxiety and dissatisfaction she attributes to her body and its size. This supports the theory of self-discrepancy in body image research, such that the greater the discrepancy between one's own body and society's ideal image will produce negative attributes toward the self.

The variable of Body Mass Index (BMI) in relation to body dissatisfaction has been a controversy in body image research. Some researchers have been able to find that BMI is influencing body dissatisfaction and the internalization of the thin ideal (e.g. Steinberg, 2004; Brown & Dittmar, 2005). Weaver and Byers (2006) report that women with an elevated BMI rated their bodies as more negative and were more likely to circumvent situations that elicit concern about body image. Furthermore, Sim and Zemen (2006) found that the further adolescent girls are from culturally prescribed body ideals (i.e., an elevated BMI) the greater body dissatisfaction these girls exhibit. Similar findings occur when comparing women of differing cultures and ethnic groups. Both European American and Latina women with a higher BMI exhibit greater appearance shame; however, the Latinas' feelings of social rejection based on appearance relate to the number of years they had resided in the United States (Breitkopf, Littleton, & Berenson, 2007). Other researchers have failed to find such an influence. One study failed to find the association between thin ideal internalization, body dissatisfaction, and BMI (Sinton & Birch, 2006). The authors speculate that an elevated weight status (i.e., BMI) may not be necessary for young girls to value appearance or engage in negative appearance evaluations (Sinton & Birch, 2006). It appears that an elevated BMI may be a

contributing factor for some individuals, but is not a necessary component to engage in body dissatisfaction or internalization of the thin ideal.

Internalization and media images. As stated earlier, Bessenoff (2006) conceptualized internalization of the thin ideal as the "acceptance of or overt agreement with social standards of thinness" (p. 239). Still unanswered is why and how do women come to internalize the thin ideal that the media has placed before them? Some argue that the role of family and friends play an integral part of thin ideal internalization (Park, 2005). Others propose that body image self-discrepancy is a critical variable in the internalization process (Bessenoff, 2006; Wedell & Santoyo, 2005; Brown & Dittmar, 2005). While these factors may contribute to the internalization of the thin ideal, repeated exposure to the thin ideal images in the media elicits a variety of negative self-appraisals, affective states, and low self-esteem due to the persistent reminder of women's inadequacy (Hawkins et al, 2004). Hawkins and colleagues (2004) found that women exposed to thin ideal media images reported increased body dissatisfaction compared to the women in the control condition that did not view any thin ideal media images. Their findings provide further implications of a causal link between exposure to such thin ideal images presented in the media and body dissatisfaction. Therefore, it appears that the more women are exposed to images of the thin ideal the greater chance of body dissatisfaction (which may result in depression, low self esteem, and eating pathology) through the process of internalization.

While images of the thin ideal bombard women everyday, not all images are taken into consideration for the same amount of time. Billboards that contain ultra thin models are seen at a fleeting glance while fashion magazines may be studied for minutes or

hours. While examining attention levels, Brown and Dittmar (2005) found that exposure to thin ideal images of women have negative effects on women's weight-focused anxiety only if they have internalized the ideal of thinness. Once the thin ideal has been internalized, weight-focused anxiety occurs regardless of the amount of attention paid to the thin ideal images. Theoretically, if women have accepted and internalized the social standards of beauty, regardless of the time spent focused on the thin image, the outcome is anxiety and negativity towards the self. Thus, internalization may play more of a role in body dissatisfaction than simple awareness of sociocultural pressures to meet one's gender role schema.

Internalization and social comparisons. Due to the internalization of the thin ideal women are more apt to make social comparisons, appearance stereotypes, and expectations. Media not only features visual images of beauty, but they also convey that beauty has social benefits in both an implicit and explicit manner (Lavin & Cash, 2000). It is this message from the media that beauty comes with benefits which results in upward social comparison and appearance stereotyping. It is no secret that our society promotes well-being, health, and beauty. Children, teenagers, and adults alike may perceive themselves, and others, in accordance with the *what is beautiful is good* stereotype. This phenomenon is strongest for perception of social confidence (e.g., popular, outgoing, likable) and psychosocial adjustment, regardless of the gender of the perceived or perceiver. Such stereotyping sometimes sets into motion self-fulfilling influences on actual social interactions and may foster appearance-based discrimination in various social contexts (Lavin & Cash, 2000). Society teaches children, starting at a very young age, that attractive people benefit from certain advantages. In addition, individuals who

are less attractive may be socially penalized or stigmatized. Lavin and Cash (2000) concluded that there exists negative stereotypes about, and probable discrimination against, attractive persons related to perceived self-centeredness, opportunism, sexuality, and sex typing.

Although there exists negative stereotypes towards attractive persons, Evans (2003) interestingly found that women's motivation to attain the thin ideal body type might not stem solely from their own body dissatisfaction. Their desire may come from motivation to attain general life satisfaction. While there may be a negative stereotype for attractive and thin women, a part of a woman may still desire to attain such thinness and attractiveness. According to Evans' (2003) research, this phenomenon occurs due to an upward social comparison process and associating thinness with positive life success. Therefore, women may have an expectation of thinness. Due to certain stereotypes of thin women, there is an expectation, both positive and negative, of women who are thin.

Society places a strong emphasis on attractiveness. This is evident by the women seen on television, in magazines, and the large focus on dieting. Because of socialization, and societal expectations, the preoccupation with appearance and the unrelenting pursuit of beauty has become one of the primary aspects of the female gender-role stereotype (Steinberg, 2004). In other words, being attractive is the central focus in our society when you are female. Society expects women to be concerned with their appearance and altering their unsatisfactory attributes through make-up, dieting, or such extremes as plastic surgery. Unfortunately, for most women, being thin is associated with being beautiful. Individuals, both men and women, attribute characteristics to others based merely on their weight and body shape. Specifically, positive qualities are associated with

being thin and toned whereas negative qualities are associated with being overweight (Ahern & Hetherington, 2006; Steinberg, 2004). Thus, there is an expectation of being thin and being overweight. This is concurrent with American society's emphasis on beauty and the stigmatization of obesity.

Although social comparison can be viewed as a separate variable, as has recently been discussed, there is also an integrative model of social comparison and the impact of exposure to idealized images. Durkin, Paxton, and Sorbello (2007) found support for a model of interrelationships between individual characteristics and negative body image followed by exposure to idealized images of females. The variables they found to be interrelated were internalization of the thin ideal, psychological functioning, body satisfaction, and body comparison (Durkin et al., 2007). Their study and model supports the theory of multiple contributing factors to body dissatisfaction that may lead to eating pathology, which is a rising disorder in westernized societies.

A recent investigation of weight restricting behavior has led to another valuable model that also encompasses the wide variety of variables that have been discussed which may lead to body dissatisfaction with a result in eating pathology. Donovan, Spence, and Scheffield (2006) conclude that a negative attributional style and an elevated Body Mass Index (BMI) may lead to body dissatisfaction, depressive symptoms, and the individual becoming upset, which begins with teasing from others. These factors are all predictors of a weight preoccupation that may result in weight restrictive behavior. In support of this model, they found numerous correlations among each variable with high implications for causation of restrictive eating behavior. They found that adolescent girls who reported greater upset by teasing about weight, greater depression, elevated BMI,

and greater negative attributional style were more preoccupied with their weight, had an increase in body dissatisfaction, and engaged in more weight restricting behaviors (Donovan et al, 2006). There were also long-term effects. The adolescent girls who had an elevated BMI, were upset by teasing, and had a negative attributional style were found more likely to be dissatisfied with their bodies and reported greater depressive symptoms one and two years later (Donovan et al, 2006). This further supports the implication for a causal link between the multitude of already discussed variables and body dissatisfaction resulting in eating pathology, especially the restrictive form.

Implicit attitudes. The majority of body image research has focused on explicit attitude through the examination of self-report measures. However, there has always been an assumed implicit attitude toward thinness. Few researchers are examining an implicit attitude toward thinness. With the development of implicit attitude and association measures, such as the Implicit Association Test (IAT), researchers now have a means to study the implicit attitudes of individuals on thinness and the thin ideal. However, results from the IAT were not as predictive of thin ideal internalization as researchers had hoped. Ahern and Hetherington (2006) developed a thin IAT test in the hope to study implicit attitude of thinness and to show predictive relationships with body satisfaction, drive for thinness, dietary restrictions, and thin ideal internalizations. Unfortunately, they did not find any such predictive relationships with the IAT whereas the explicit measures (i.e., self-report) did show such predictive relationships. However, the thinness IAT did demonstrate that participants are more likely to associate the word ‘thin’ with positive attributes and are more likely to associate the word ‘fat’ with negative attributes (Ahern & Hetherington, 2006). It is contrary to intuition that results would show a predictive

value for such variables with self-report measures and not with implicit measures. Ahern and Hetherington (2006) theorize that perhaps the thinness IAT they had developed was not sensitive enough to illustrate this predictive value. Their thinness IAT did show results for an association with thin and positive attributes, so the researchers appear to be on the correct path.

Expectations. The bulk of body image research has focused on sociocultural influences, body dissatisfaction, and internalization of the thin ideal. Steinberg (2004), by developing the Thinness Expectancy Questionnaire (TEQ), was the first researcher to embark on studying the expectations of thinness. "Expectancy theory states that behaviors that are reinforced on a consistent basis are thought to be more likely to result in similar reinforcement in the future" (Steinberg, 2004, p. 19). Steinberg (2004) applies expectancy theory to body image research by conceptualizing expectancies as the anticipated consequences of being thin. For example, an individual may have the expectation that if they were to achieve society's ideal body image, they will also attain popularity and perhaps even success. Since women, through socialization and internalization, develop specific ideas about what it means to be thin and attractive, they will naturally have expectations of individuals who have already attained the status of thin and attractive. Steinberg's research (2004) concluded that there are expectations regarding thinness and these expectations relate to body image and eating pathology. Specifically, women who attributed favorable characteristics (e.g., pretty, sexy, outgoing) to being thin also had higher levels of body dissatisfaction, bulimic tendencies, and a preoccupation with weight and dieting. Those women who reported such higher positive expectancies of being thin also reported higher levels of awareness and internalization of

societal norms regarding attractiveness. Specifically, participants reported an increased desire to resemble, a greater tendency to compare themselves to, and greater attempts to look like people in the movies, on television, and athletes (Steinberg, 2004). Thus, the more positive attributes and expectancies that women associate to being thin, the more they accept the societal definition of attractiveness and behave accordingly.

Negative expectancies of being thin did not correlate with drive for thinness or with body dissatisfaction; however, contradictory to the theory, negative expectancies of being thin correlate with bulimic tendencies. Women who reported higher levels of negative characteristics of thinness (e.g., conceited, frail, weak) also reported higher levels of internalized beliefs regarding the sociocultural definition of attractiveness. Therefore, women reported negative consequences associated with being thin, yet still reported an increased desire and greater attempts to resemble people in the media that represent the societal ideal (Steinberg, 2004). Negative expectancies of thinness do not prevent women from the pursuit of beauty. Steinberg's (2004) findings on negative expectancies of thinness appeals to the powerful impact that the media has on a woman's desire to conform to the ideal physique portrayed by the media.

There are many contributing factors to body dissatisfaction, which may lead to eating pathology. The focus of this experiment is on thinness expectancy. There has been little research done on the expectations of thinness due to the lack of valid and reliable measuring tools. Expectations of thinness have not been widely looked at as a contributing variable to body dissatisfaction and eating pathology. This oversight by researchers may be due to blindness by obvious contributing variables, such as negative attribution, thin ideal internalization, or depression and low self-esteem. With the recent

development of the Thinness Expectancy Questionnaire (TEQ) researchers can now begin to study thinness expectancies. I hypothesize that:

1. Women exposed to thin ideal images will report greater positive expectancies of thinness;
2. Women who have a higher Body Mass Index (BMI) will report greater pressure, but women with a lower BMI will report greater information and generalized internalization;
3. High internalization-athleticism will be reported regardless of BMI and the type of image that is viewed.

Method

Participants

A total of 107 female students from a Midwestern university volunteered to participate. Of the 107, two participants measured as "underweight" and therefore were omitted from analysis to maintain equal cells for Body Mass Index. Participants' ages ranged from 17 to 48 (M = 20.23, SD = 4.42). The ethnic composition of the participants was 68.6% Caucasian, 12.4% African American, 9.5% Other, 6.7% Hispanic, and 2.9% Asian American. No participants were clinically diagnosed with an eating disorder and English was their first language. In regards to education level, 65.7% were in their freshman year of college, 21.9% were in their sophomore year, 5.7% were in their junior year, 2.9% were in their senior year, and 3.8% were graduate students. See Table 1 for further descriptive statistics.

The female population is the media's target group for advertising through fashion magazines. In order to simulate the group that the media targets, all participants were

female. However, this does mean that the results obtained from this study will only be generalizable to females. Some may argue that this is a flaw in relation to external validity. Although the use of only female participants will decrease the external validity, this same aspect will increase the internal validity.

Materials

Advertisements. There were three conditions of advertisements: the thin ideal condition, the average weight condition, and the control condition. The thin ideal condition consisted of advertisements portraying models that were below the weight of the average woman. The average weight condition consisted of advertisements portraying models that were similar to the weight of the average woman. Finally, the control condition consisted of those advertisements portraying no models. Each condition was presented using DirectRT sofware, in the form of a computerized slideshow of 24 full-page advertisements, that were taken from popular women's magazines. Specifically, these magazines were *Vogue*, *Cosmopolitan*, *Seventeen*, and *Oprah*. No advertisements contained men, food, or dieting products. All advertisements containing persons showed at least 75% of the model's body. The control images contained no models, food, or dieting products. They consisted of inanimate objects such as cars, jewelry, and shoes. The images used for the control condition were from the same magazines as the thin ideal images and average weight images.

Body composition measures. A quasi-independent variable, Body Mass Index (BMI), was assessed. Height and weight were measured and recorded by the researcher using a digital scale and a standard tape measure. Using the height and weight measurement of each participant, BMI and percentage of body fat was calculated using

the Omron Body Logic (HBF-306), a hand held bioimpedance body fat analyzer, purchased through the Creative Health Products (n.d.) website. BMI is a calculation based on the division of the individual's weight in kilograms by his or her height in meters squared (Fahey, Insel, & Roth, 2007). This calculation will result in participants categorized into one of four BMI classifications: underweight is less than 18.5, normal ranges from 18.5 to 24.9, overweight ranges from 25.0 to 29.9, and obese will be greater than 30.0. According to BMI charts, there are three classifications of obesity (Fahey, Insel & Roth, 2007). For this study, obese was classified as anything in and over the first obesity stage (i.e., BMI greater than 30.0). Percentage of body fat was categorized as low (less than 21.0%), average (21.0% to 32.9%), and over (33% and above) in accordance with Fahey, Insel, and Roth (2007).

Questionnaires. The Thinness Expectancy Questionnaire (TEQ), developed by Steinberg (2004) was used to measure positive and negative expectancies of thinness. The TEQ is a recently developed and validated scale. Specifically, Steinberg (2004) found an alpha of .98 for the positive subscale and an alpha of .93 for the negative subscale. The items on the TEQ are measured on a 7-point scale ranging from 1 (*completely disagree*) to 7 (*completely agree*).

The TEQ requires that participants complete the following word stem "Being thin makes one_____." Participants were provided with a list of 76 adjectives that they used to complete the previously mentioned sentence and rate on the previously mentioned 7-point Likert Scale. "Beautiful", "confident", and "energetic" are examples of adjectives that would implicate a positive expectancy. On the other hand, "conceited", "frail", and

"malnourished" are examples of adjectives that would implicate a negative expectancy. See Appendix A for the complete version of the TEQ.

The Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3) was also administered. The SATAQ-3 has been found to be a valid and reliable measure (Thompson, Roehrig, Guarda, & Heinberg, 2004). The SATAQ-3, developed by Thompson et al. (2004) assesses participants' awareness and internalization of sociocultural attitudes, specifically toward appearance. The SATAQ-3 results in a 30-item scale comprised of four subscales: internalization-general (9-items), internalization-athlete (5-items), pressures (7-items), and information (9-items). Thompson et al. (2004) found an alpha of .96 for the internalization-general subscale, an alpha of .96 for the information subscale, an alpha of .95 for the internalization-athlete subscale, and an alpha of .92 for the pressures subscale. The items on the SATAQ-3 are on a 5-point scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*). An example from the information subscale is "TV programs are an important source of information about fashion and being attractive." An example from the pressures subscale is "I've felt pressure from TV or magazines to lose weight." An example from the internalization-general subscale is "I would like my body to look like the people who are on TV." An example from the internalization-athlete subscale is "I wish I looked as athletic as the people in magazines." See Appendix B for the complete version of the SATAQ-3.

A general information questionnaire was administered after the completion of the Thinness Expectancy Questionnaire and the Sociocultural Attitudes Towards Appearance Questionnaire-3. It consists of basic information on each participant such as gender, age, ethnicity, year in school, and a variety of questions to be used for future exploratory

purposes regarding the participants' ideal weight, frequency of exercise, and frequency of fashion magazine purchases. See Appendix C for the complete version of the general information questionnaire.

Procedure

Upon entering the room, participants were greeted by the researcher and given an informed consent form. They were given as long as they needed to read the informed consent form and sign each copy. One copy was for the participants' records, while the second copy was for the researcher's records.

The researcher then explained that the participant would view a variety of pictures and the computer would provide further instructions pertaining to the survey portion of the experiment. The researcher then explained that the surveys might ask questions that may make the participant uncomfortable. If the participant feels uncomfortable for any reason, they will be able to stop the experiment without penalty at any time. In addition, the researcher provided the participant with information pertaining to the anonymity to the research. The researcher informed the participant that their answers would be completely anonymous and that there would be no way for anyone, including the researcher, to trace their responses back to them. The researcher then asked the participant to answer all questions as honestly as possible and thank them for their participation.

Participants were randomly assigned to a computer within a cubicle laboratory, which determined the condition of treatment (thin models, average weight models, or no models). After viewing the images, participants were instructed by DirectRT software to complete the Thinness Expectancy Questionnaire (TEQ) developed by Steinberg (2004)

and the Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3) developed by Thompson, Roehrig, Guarda, and Heinberg (2004). After completion of the TEQ and the SATAQ-3, participants completed the general informational sheet. Once all inventories were complete, the researcher measured the participant's height and weight using a standard tape measure and a digital scale respectively. These measurements were recorded on a lab sheet. The lab sheet indicated which ID number was assigned to which cubicle. Using this recording method, there was no connection between participants' names, identification numbers, or height and weight. The height and weight of each participant was then used to assess and record Body Mass Index (BMI) and percentage of body fat, using the handheld Omron Body Logic.

After all inventories and measurements were taken, the researcher debriefed each participant. The researcher provided contact information in case any adverse effects due to their participation were experienced. The researcher then asked them not to discuss the experiment with anyone until the experiment is completed, and thanked them again for their participation.

Results

A 3 (type of advertisement) x 4 (Body Mass Index) multivariate analysis of variance (MANOVA) was originally designed. The independent variable, type of advertisement, consists of three levels: thin ideal models, average-weight models, and no models. The second independent variable, Body Mass Index (BMI), consists of four levels: underweight, normal, overweight, and obese. However, due to the omission of two participants who measured as "underweight", BMI will only contain three levels: normal, overweight, and obese. This modification resulted in a 3 (type of advertisement) x 3

(Body Mass Index) between subjects MANOVA, which was run on both Thinness Expectancy Questionnaire (TEQ) subscales and all four subscales of the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-3). Evaluation of assumptions of normality and homogeneity were satisfactory for the TEQ and all but one subscale of the SATAQ-3. The pressure subscale was satisfactory for normality, but homogeneity was unsatisfactory. However, the MANOVA design is robust to violations of this sort when there are an equal number of participants across all conditions (Tabachnick & Fidell, 2006).

Expectations

It was hypothesized that women exposed to thin ideal images will report greater positive expectancies of thinness (Hypothesis 1). With the use of Wilks' criterion, expectations of thinness were found to be a function of type of advertisement viewed; however, Hypothesis 1 was not supported. Rather than reporting greater positive expectations, women exposed to thin ideal images reported greater negative expectations of thinness, $F(2, 104) = 5.37$, $p < .05$, $\eta_p^2 = .062$. See Table 2 for means and standard deviations of dependent variables corresponding to type of advertisement viewed. Specifically, females who viewed advertisements portraying thin models reported significantly greater negative expectations ($M = 3.17$, $SD = .79$) than females who viewed advertisements portraying average sized models ($M = 2.54$, $SD = .86$). See Table 3 for analysis of variance (ANOVA) and Table 4 for multiple comparisons.

Sociocultural Attitudes

It was hypothesized that women who have a higher Body Mass Index (BMI) will report greater pressure, but women with a lower BMI will report greater information and

generalized internalization (Hypothesis 2); however, the data did not support Hypothesis 2. Using Wilks' criterion, BMI was not found to be a function of the SATAQ-3 information, $F(2, 104) = .72$, $p = .490$, $\eta_p^2 = .015$; pressure, $F(2, 104) = 2.03$, $p = .136$, $\eta_p^2 = .041$; or internalization-general, $F(2, 104) = 1.29$, $p = .280$, $\eta_p^2 = .026$ subscales. See Table 5 for a breakdown of means and standard deviations of dependent variables corresponding to level of BMI.

It was further hypothesized that high internalization of athleticism will be reported regardless of Body Mass Index (BMI) and viewed advertisement (Hypothesis 3). Using Wilks' criterion, the data did support Hypothesis 3. Specifically, there was no statistically significant difference on the internalization-athlete subscale across type of advertisements and Body Mass Index, $F(8, 104) = 1.09$, $p = .376$, $\eta_p^2 = .030$. All participants, regardless of BMI and type of advertisement viewed, reported a relatively high score on the internalization-athlete subscale. See Table 6 for means and standard deviations of the internalization-athlete subscale corresponding to type of advertisement viewed and BMI.

Body Mass Index vs. Percentage of Body Fat

Many body image studies (e.g, Brown & Dittmar, 2005; Weaver & Byers, 2006; Sim & Zemen, 2006; Breitkopf, Littleton, & Berenson, 2007) utilize the Body Mass Index (BMI) equation when considering participants' weight. However, the BMI scale is a calculation based solely on height and weight; it fails to account for muscle mass. Therefore, a 3 (type of advertisement) x 3 (level of fat percentage) between subjects multivariate analysis of variance (MANOVA) was run on both expectancy subscales of the Thinness Expectancy Questionnaire (TEQ) and all four subscales of the Sociocultural

Attitudes Towards Appearance Questionnaire (SATAQ-3). Comparison was then made to the 3 (type of advertisement) x 3 (Body Mass Index) MANOVA previously run. Although the same significance was found (see results from Hypothesis 1), the significance of *F* was different across all subscales. See Table 7 for a comparison of BMI and percentage of body fat levels of significance.

Attention

DirectRT software records the duration that participants' spend on each slide. A one-way analysis of variance (ANOVA) was used to analyze the response time of all 24 advertisements in each condition: thin, average, neutral. A statistically significant difference was found in the response time for the different types of advertisements, $F(2, 104) = 5.496$, $p < .05$. Specifically, participants' spent a significantly greater amount of time viewing average sized models ($M = 132.00$, $SD = 88.51$) than they did viewing thin models ($M = 83.32$, $SD = 37.70$). See Table 8 for one-way ANOVA and Table 9 for response time comparisons.

Discussion

Body image and eating pathology research has examined a plethora of variables to determine the etiology of eating disorders in an attempt to, one day, be able to make predictions of future eating pathology. Although numerous correlational and multiple regression studies have been conducted, resulting in an ever-increasing contributory factor list, no set list of variables have been found to be accurate predictors of eating pathology. This study attempted to contribute to that factor list by examining the variable of expectations of thinness.

Expectations

In accordance with Steinberg (2004), it was hypothesized that women viewing thin models will report greater positive expectations of thinness. On the contrary, results indicate that women viewing thin models report greater negative expectations of thinness. This contradiction may be a result of the sample population or a result of a shift in societal attitudes. The sample population was primarily undergraduate students, and since the majority of education pertaining to the media's influence occurs during college years, it makes sense that the sample population was aware of tactics the media uses to alter the female body, such as airbrushing. However, one can only hope that the results indicate a shift in attitude regarding the thin ideal. With fashion magazines actually airbrushing *additional* curves onto women (Nikkhah, 2008), this could be the beginning of the "body ideal pendulum" swinging back to a curvy ideal from the thin ideal. The head of press and PR at Condé Nast, which publishes *Vogue*, *GQ*, and *Glamour*, confirmed that images of models were enhanced to make them appear fuller-figured (Nikkah, 2008). However, there appears to be a blurred line between a body that is too heavy and a body that is too thin. In the same report, there was admission from the publishers and shock from the models regarding computerized alteration of the body. For example, Kate Winslet was surprised to see that her body had been slimmed while Keira Knightley was surprised to see her body had been made curvier (Nikkah, 2008). Although certain publishers are adding curves to images, they are still taking some curves away. This results in a message for readers claiming that there is still a specific body type ideal—one that is not too curvy but not too slim.

Feminist theorists argue that eating pathology and body image dissatisfaction is a backlash from women's liberation and the result of living within a patriarchy (see Wolf, 2002; Fallon, Katzman, & Wooley, 1994). Perhaps the increase in eating disorders during the 1980s and 1990s was a result of second-wave feminists fighting for women's liberation; now, the third-wave feminists are fighting for a woman's right to have curves. Feminist theory makes the argument that, conscious or unconscious, eating pathology is a way for women to exert control in an uncontrollable environment. Interestingly, eating pathology has waxed and waned in accordance with changes in gender roles. History is witness to "the hourglass figure of the fifties to the androgynous, increasingly elongated, slender look that has developed over the past decade" (Bordo, 2003, p. 206). Interpreting the results from the current study, with consideration of eating pathology and gender roles coinciding throughout history, it is reasonable to predict that there will soon be—if not currently happening—another shift in gender roles.

Sociocultural Attitudes

Results did not support the hypothesis that females with a greater Body Mass Index (BMI) will report greater pressure and women with a lower BMI will report greater information and general internalization. The researcher theorizes the lack of significance found is further support for a "thin ideal rebellion". Women do not report pressure to be thin after viewing ultra-thin models. In addition, women did not report internalization of the thin ideal. With women gaining greater power in the workplace and higher education degrees, women are fighting back against the thin ideal and realizing that success and happiness do not stem from being thin. Rather than a focus on thinness, women are focusing on academics and career status as signals for success. However, there is still an

inequality of pay between genders. Over the last decade, women's pay has increased but not substantially. Regardless of the educational level earned, inequality of pay is a constant reminder of inferiority; women are living in an environment that implies a successful career along with a family and ideal body image is unattainable. Research studies have found males report women cannot be both warm and confident at the same time (Gleaton, Holloway, Reaves, 2009) while females report women to be both warm and confident (Holloway, Vadnais, Zhao, 2009). Despite the attitude of society and males in general, women are now believing and adhering to the idea that they can do it all—have a successful career, a happy family, and now, happiness with their weight. With the status of the economy, money, not the body, is the signal for a happy and successful woman.

Although studies yield significant results from the SATAQ-R, the third version of the scale has a subscale of interest that previous versions do not: internalization-athlete. The health industry is on the rise through health foods and health magazines. Currently, the pressure to be thin is decreasing, while the pressure to have a toned and fit body is increasing. From low calorie to low fat to organic, health food is exponentially on the rise. Although it has yet to be added to the American Psychiatric Association's Diagnostic and Statistical Manual, *orthorexia nervosa* is quickly becoming popular. Orthorexia nervosa, a term coined by Steven Bratman, M.D., refers to a pathological fixation on eating proper foods (Bratman & Knight, 2001). Individuals suffering from orthorexia may be eating foods labeled 'healthy'; however, his or her body may not be receiving all of the necessary and recommended nutrients.

Body Mass Index vs. Body Fat Percentage

Body composition measures have always been a problem among body image researchers. Body Mass Index (BMI) is easy to measure, yet it fails to take into account muscle mass. Body fat percentage, as calculated by the Omron Body Logic, does account for an "athletic" lifestyle. Results, using BMI and percentage of body fat, indicate a difference in significance levels. The majority of which were closer to statistical significance when using percentage of body fat rather than BMI. Researchers need to replicate studies using percentage of body fat. At the very least, researchers should utilize both body composition measures for more accurate and well-rounded results. Especially with research using athletes, the BMI calculation is an insufficient measure, while percentage of body fat is a much more accurate measure.

Attention

Research indicates that if women have accepted and internalized the social standards of beauty, regardless of the time spent focused on the thin image, the outcome is anxiety and negativity towards the self (Brown & Dittmar, 2005). Interestingly, women viewed the average size models significantly longer than the thin models. The researcher has two theories to explain this outcome. First, perhaps females are starting to feel disgust by the ultra thin image, and therefore, they opt not to look at such images. Second, greater attention was paid to average size models because of saliency. When the participants viewed fashion magazine advertisements portraying average size models, it seemed out of the ordinary and unusual, and thus, participants viewed these advertisements longer than the others advertisements. However, the results of the attention to different advertisements could be a combination of these two theories:

females do not like viewing ultra thin models and it is unusual to see an average-size fashion model.

Limitations

There are a few limitations to this study. First, the sample population consisted of only females enrolled in college. Future studies should examine expectations of thinness in younger populations, such as high school and middle school children. Due to the awareness of the media's portrayal of women that accompanies a college education, thinness expectancy research needs to begin at a younger age. Second, an eating inventory was not included in this study. Although participants who volunteered were not clinically diagnosed with an eating disorder, there is still a chance that participants' had abnormal eating habits. Since high negative expectations were found, an eating inventory such as the Eating Disorder Inventory (EDI) would be beneficial to future research. Steinberg (2004) found that women who report greater negative expectations also report bulimic tendencies. This finding could not be supported since there was no bulimic scale included in analysis. Third, this study had a very narrow population: majority of participants were white, heterosexual, between 19 and 20 years of age, and freshmen in college. In addition, all participants were female. To increase generalization of this study, a broader sample is required.

Future Research

Many of the previous research can be reinvestigated using the Thinness Expectancy Questionnaire (TEQ). Of particular interest is a replication of Ahern and Heatherington's (2006) implicit attitude study. The researchers reported that perhaps their

word stimuli were not effective enough. Using the adjectives from the TEQ alongside images of women of different weight could be more effective.

Because of the sample population, future research should replicate this study using different age groups, especially children. Most importantly, future research should examine male populations. Although eating pathology is mostly reported among females, male eating pathology does exist—especially in subpopulations such as homosexuals and athletes. First, future research should examine the heterosexual male perspective of the female body type. Is the thin ideal still the preferred body type by males, or is the preferred body type shifting towards a fuller figure? According to evolutionary theory, women are in competition with each other for mates. It is only logical that the ideal body for women stems from the male perspective of what is beautiful and sexual. So, for example, this study can be replicated using a male population to determine which body type is preferred by men—thin or average. Second, future research should examine the homosexual and male athlete perspective of male body type to determine if there is a body ideal among males. Although the male body ideal may differ in relation to the type of athlete, the athlete is still molding his body to comply with specific bodily expectations that may result in eating pathology.

The current study examined differences between thin models and average models. Results indicate that there is a shift from the thin ideal to an athletic ideal. More and more, women are adhering to a toned and fit yet curvy physique rather than the ultra thin physique with a lack of feminine indicators, such as hips and breasts. Because of this change in society and women's perspective, future research needs to examine the

expectations of the toned body. This can easily be done by replicating this study, but research should include a set of images portraying a toned and fit body.

References

Ahern, A. L., & Hetherington, M. M. (2006). The thin ideal and body image: An experimental study of implicit attitudes. *Psychology of Addictive Behaviors, 20*, 338-342.

Bessenoff, G. R. (2006). Can the media affect us? Social comparison, self-discrepancy, and the thin ideal. *Psychology of Women Quarterly, 30*, 239-251.

Bordo, S. (2003). *Unbearable weight: Feminism, western culture, and the body.* Berkeley, CA: University of California.

Bratman, S., & Knight, D. (2001). *Health food junkies: Orthorexia nervosa: Overcoming the obsession with healthful eating.* New York: Broadway Books.

Breitkopf, C. R., Littleton, H., & Berenson, A. (2007). Body image: A study in a tri-ethnic sample of low income women. *Sex Roles, 56*, 373-380.

Brown, A., & Dittmar, H. (2005) Think "thin" and feel bad: The role of appearance schema activation, attention level, and thin-ideal internalization for young women's responses to ultra-thin media ideals. *Journal of Social and Clinical Psychology, 24*, 1088-1113.

Creative Health Products. (n.d.). *Bio-impedance analyzers*. Retrieved from http://chponline.com/chpstore.asp?WCI=wciProduct&WCE=2.

Dittmar, H., & Howard, S. (2004). Thin-ideal internalization and social comparison tendency as moderators of media models' impact on women's body-focused anxiety. *Journal of Social and Clinical Psychology, 23*, 768-791.

Donovan, C. L., Spence, S. H., & Sheffield, J. K. (2006). Investigation of a model of weight restricting behavior amongst adolescent girls. *European Eating Disorders Review, 14,* 468-484.

Durkin, S. J., Paxton, S. J., & Sorbello, M. (2007). An integrative model of the impact of exposure to idealized female images on adolescent girls' body satisfaction. *Journal of Applied Social Psychology, 37,* 1092-1117.

Engeln-Maddox, R. (2005). Cognitive responses to idealized media images of women: The relationship of social comparison and critical processing to body image disturbance in college women. *Journal of Social and Clinical Psychology, 24,* 1114-1138.

Etcoff, N. (1999). *Survival of the prettiest.* New York: Anchor Books.

Evans, P. C. (2003). If only I were thin like her, maybe I could be happy like her: The self-implications of associating a thin female ideal with life success. *Psychology of Women Quarterly, 27,* 209-214.

Faer, L. M., Hendricks, A., Abed, R. T., & Figueredo, A. J. (2005). The evolutionary psychology of eating disorders: Female competition for mates or for status? *Psychology and Psychotherapy: Theory, Research and Practice, 78,* 397-417.

Fahey, T. D., Insel, P. M., & Roth, W. T. (2007) *Fit & Well: Core concepts in physical fitness and wellness* (7th ed.). New York: McGraw Hill.

Fallon, P., Katzman, M. A., & Wooley, S. (Eds.). (1994). *Feminist perspective on eating disorders.* New York: Guilford.

Gatward, N. (2001). The ability to tolerate starvation: A role in anorexia nervosa? *European Eating Disorders Review, 9,* 359-364.

Gatward, N. (2007). Anorexia nervosa: An evolutionary puzzle. *European Eating Disorders Review, 15,* 1-12.

Gleaton, J., Holloway, H., & Reaves, M. (2009, April). *Female perceptions: Ambivalent sexism, self-ideal congruency, and group difference.* Poster session at the 27th annual Oklahoma Psychological Society conference, Edmond, OK.

Guisinger, S. (2003). Adapted to flee famine: Adding an evolutionary perspective on anorexia nervosa. *Psychological Review, 110,* 745-761.

Halliwell, E., & Dittmar, H. (2004). Does size matter? The impact of model's body size on women's body-focused anxiety and advertising effectiveness. *Journal of Social and Clinical Psychology, 22,* 104-122.

Hawkins, N., Richards, P.S., Granley, H.M., & Stein, D.M. (2004). The impact of exposure to the thin-deal media image on women. *Eating Disorders, 12,* 35-50.

Holloway, H., Vadnais, A., & Zhao, J. (2009, April). *Perceptions from males: Support for ambivalent sexism and self-congruency.* Poster session at the 27th annual Oklahoma Psychological Society conference, Edmond, OK.

Lavin, M.A., & Cash, T. (2000). Effects of exposure to information about appearance stereotyping and discrimination on women's body images. *International Journal of Eating Disorders, 29, 51*-58.

MacBrayer, E. K., Smith, G. T., McCarthy, D., M. Demos, S. & Simmons, J. (2001). The role of family of origin food-related experiences in bulimic symptomatology. *International Journal of Eating Disorders, 30,* 149-160.

Nikkhah, R. (2008, April 13). *Now fashion mags make models 'fatter'*. Retrieved April 25 2008 from http://www.telegraph.co.uk/fashion/3364825/Now-fashion-mags-make-models-fatter.html.

Park, S. (2005) The influence of presumed media: Influence on women's desire to be thin. *Communication Research, 32*, 594-614.

Pinel, J. P. J., Assanand, S., & Lehman, D. R. (2000). Hunger, eating, and ill health. *American Psychologist, 55*, 1105-1116.

Sim, L., & Zeman, J. (2006). The contribution of emotion regulation to body dissatisfaction and disordered eating in early adolescent girls. *Journal of Youth and Adolescence, 35*, 219-228.

Sinton, M. M., & Birch, L. L. (2006). Individual and sociocultural influences on pre-adolescent girls' appearance schemas and body dissatisfaction. *Journal of Youth and Adolescence, 35*, 165-175.

Steinberg, A. R. (2004). The development and validation of the thinness expectancy questionnaire (TEQ). (Doctoral dissertation, University of South Florida, 2004). *Dissertation Abstracts International, 65*, 2653.

Stice, E., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. I. (1994). Relation of media exposure to eating disorder symptomatology: An examination of mediating mechanisms. *Journal of Abnormal Psychology, 103*, 836-840.

Sypeck, M. F., Gray, J. J., & Ahrens, A. H. (2004). No longer just a pretty face: Fashion magazines' depictions of ideal female beauty from 1959 to 1999. *International Journal of Eating Disorders, 36*, 342-347.

Tabachnick, B. G. & Fidell, L. S. (2006). *Using multivariate statistics.* (5th ed.). Boston: Allyn & Bacon

Thompson, J. K., van den Berg, P., Roehnig, M., Guarda, A. S., & Heinberg, L. J. (2004). The sociocultural attitudes towards appearance scale-3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders, 35,* 293-304.

Weaver, A. D., & Byers, E. S. (2006). The relationships among body image, body mass index, exercise, and sexual functioning in heterosexual women. *Psychology of Women Quarterly, 30,* 333-339.

Wedell, D. H., & Santoyo, E. M. (2005). The thick and the thin of it: Contextual effects in body perception. *Basic and Applied Social Psychology, 27,* 213-227.

Wolf, N. (2002). *The beauty myth: How images of beauty are used against women.* New York: Harper Perennial.

Appendix A

Thinness Expectancy Questionnaire

The following pages contain words and/or phrases describing the possible consequences of being thin. For each word of phrase below, imagine it completing the sentence "BEING THIN MAKES ONE _____." Then rate how much you agree with that particular sentence.

It is important to keep in mind that there are no right or wrong answers. We are just asking you for your personal opinion regarding being thin. Please answer each item quickly according to your first impression and our own personal feelings and beliefs.

1	2	3	4	5	6	7
Completely Disagree	Mostly Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Mostly Agree	Completely Agree

"BEING THIN MAKES ONE _____."

1. A conformist
2. Able to fit into clothes
3. Able to wear revealing/tight clothes
4. Accepted
5. Active
6. Advantageous
7. Agile
8. Athletic
9. Attractive

10. Beautiful
11. Better-looking
12. Boyish
13. Conceited
14. Confident
15. Content
16. Cute
17. Defined
18. Depressed
19. Desirable
20. Emaciated
21. Energetic
22. Envied
23. Exercise
24. Feel better about themselves
25. Feel better in relationships
26. Feel good about themselves
27. Flat-chested
28. Flexible
29. Fragile
30. Frail
31. Fun
32. Get attention

33. Good-looking
34. Happy
35. Have a positive body image
36. Have high self-esteem
37. Have high self-image
38. Have high self-worth
39. Healthy
40. In Control
41. In Shape
42. Insecure
43. Liked by others
44. Look better in a swimsuit
45. Malnourished
46. More likely to go to the beach
47. More open with their body
48. Noticed
49. Optimistic
50. Outgoing
51. Party/Go out more
52. Physically fit
53. Popular
54. Pretty
55. Proud

56. Respected
57. Sad
58. Satisfied
59. Secure
60. Self-assured
61. Self-confident
62. Self-conscious
63. Sexual
64. Sexy
65. Smart
66. Sociable
67. Socially accepted
68. Tired
69. Unappealing
70. Uncomfortable
71. Underweight
72. Unhealthy
73. Upset
74. Want to stay thin
75. Wanted
76. Weak

Appendix B

Sociocultural Attitudes Towards Appearance Questionnaire-3

Please read each of the following items, and circle the number that best reflects your agreement with the statement.

Definitely Disagree 1	Mostly Disagree 2	Neither Agree Nor Disagree 3	Mostly Agree 4	Definitely Agree 5

1. TV programs are an important source of information about fashion and "being attractive".
2. I've felt pressure from TV or magazines to lose weight.
3. I would like my body to look like the people who are on TV.
4. I compare my body to the bodies of TV and movie stars.
5. TV commercials are an important source of information about fashion and "being attractive".
6. I've felt pressure from TV or magazines to look pretty.
7. I would like my body to look like the models who appear in magazines.
8. I compare my appearance to the appearance of TV and movie stars.
9. Music videos on TV are an important source of information about fashion and "being attractive".
10. I've felt pressure from TV and magazines to be thin.
11. I would like my body to look like the people who are in the movies.
12. I compare my body to the bodies of people who appear in magazines.

13. Magazine articles are an important source of information about fashion and “being attractive”.
14. I’ve felt pressure from TV or magazines to have a perfect body.
15. I wish I looked like the models in music videos.
16. I compare my appearance to the appearance of people in magazines.
17. Magazine advertisements are an important source of information about fashion and “being attractive”.
18. I’ve felt pressure from TV or magazines to diet.
19. I wish I looked as athletic as the people in magazines.
20. I compare my body to that of people in “good shape”.
21. Pictures in magazines are an important source of information about fashion and “being attractive”.
22. I’ve felt pressure from TV or magazines to exercise.
23. I wish I looked as athletic as sports stars.
24. I compare my body to that of people who are athletic.
25. Movies are an important source of information about fashion and “being attractive”.
26. I’ve felt pressure from TV or magazines to change my appearance.
27. I try to look like the people on TV.
28. Movie stars are an important source of information about fashion and “being attractive”.
29. Famous people are an important source of information about fashion and “being attractive”.
30. I try to look like sports athletes.

Appendix C

General Information Questionnaire

Please answer **all** of the following questions:

1. Age: _____

2. Ethnicity: _____ African-American, Black

   _____ Asian-American

   _____ Caucasian, White

   _____ Hispanic

   _____ Other

3. Sexual Orientation:

   _____ Heterosexual _____ Homosexual _____ Bisexual

4. Marital Status:

   _____ Married _____ Single _____ Divorced _____ Engaged

5. Year at UCO:

   _____ Freshman _____ Sophomore _____ Junior _____ Senior _____ Graduate

6. What is your ideal weight? _____lbs.

7. Do you think you are:

   ____ very underweight

   ____ a little underweight

   ____ about the right weight

   ____ a little overweight

   ____ very overweight

8. How often have you gone on a diet to lose weight in the **past year**?

____ Never

____ 1 or 2 times

____ 3 to 5 times

____ 6 to 10 times

____ 11 or more times

9. How often do you exercise during the **week**?

____ Never

____ 1-2 days a week

____ 3-4 days a week

____ 5-6 days a week

____ 7 days a week

10. How often have you purchased fashion magazines in the **past year**?

____ Never

____ 1 or 2 times

____ 3 to 5 times

____ 6 to 10 times

____ 11 or more times

Table 1 Descriptives

	Females (*n* = 105)	
	M	**SD**
Age	20.23	4.42
Ideal Weight (lb)	127.70	18.98
Calculated Weight (lb)	149.00	33.97
Calculated BMI	26.19	5.97
Calculated % of Body Fat*	28.14	6.04
Calculated Height (in)	63.23	2.13

Note. The Omron Body Logic was unable to calculate percentage of body fat for three participants. **n* = 102.

Table 2 Type of Advertisement Viewed

	Thin		*Average*		*Neutral*	
Dependent Variables	**M**	**SD**	**M**	**SD**	**M**	**SD**
TEQ-P (56 items)	3.82	1.12	3.38	1.01	3.97	0.91
TEQ-N (20 items)	3.17	0.79	2.54	0.86	2.74	0.89
SATAQ-I (9 items)	3.27	1.01	3.13	1.06	3.31	1.12
SATAQ-P (7 items)	3.37	1.29	3.37	1.31	3.63	0.96
SATAQ-IG (9 items)	3.41	1.26	3.15	1.16	3.71	0.99
SATAQ-IA (5 items)	3.40	1.05	3.42	0.94	3.37	1.07

Note. TEQ-P = Thinness Expectancy Positive subscale; TEQ-N = Thinness Expectancy Negative subscale; SATAQ-I = Sociocultural Attitudes Towards Appearance Questionnaire Information subscale; SATAQ-P = Pressures subscale; SATAQ-IG = Internalization-General subscale; SATAQ-IA = Internalization-Athlete subscale.

Table 3 Analysis of Variance for Thinness Expectancy Questionnaire

		SS	*df*	*MS*	*F*
Positive Expectancy	Between Groups	6.443	2	3.221	3.048
	Within Groups	107.789	102	1.057	
	Total	114.232	104		
Negative Expectancy	Between Groups	7.633	2	3.817	5.369*
	Within Groups	72.502	102	0.711	
	Total	80.135	104		

* $p < .05$.

Table 4 Multiple Comparisons of Expectations Across Advertisements

	Condition (I)	*Condition (J)*	*Mean Difference (I-J)*	*Standard Error*
positive expectancy	thin	average	0.4373	0.23742
		neutral	-0.149	0.25107
	average	thin	-0.437	0.23742
		neutral	-0.587	0.25256
	neutral	thin	0.1495	0.25107
		average	0.5868	0.25256
negative expectancy	thin	average	.62514*	0.19472
		neutral	0.4281	0.20591
	average	thin	.62514*	0.19472
		neutral	-0.197	0.20713
	neutral	thin	-0.428	0.20591
		average	0.1971	0.20713

* $p < .05$.

Table 5 Body Mass Index

	Normal		*Overweight*		*Obese*	
Dependent Variables	**M**	**SD**	**M**	**SD**	**M**	**SD**
TEQ-P (56 items)	3.70	0.94	3.97	1.07	3.33	1.21
TEQ-N (20 items)	2.78	0.84	3.04	0.91	2.63	0.91
SATAQ-I (9 items)	3.20	1.01	3.14	1.11	3.46	1.09
SATAQ-P (7 items)	3.28	1.18	3.44	1.23	3.89	1.18
SATAQ-IG (9 items)	3.31	1.17	3.42	1.18	3.63	1.15
SATAQ-IA (5 items)	3.30	0.99	3.37	1.07	3.71	0.91

Note. TEQ-P = Thinness Expectancy Positive subscale; TEQ-N = Thinness Expectancy Negative subscale; SATAQ-I = Sociocultural Attitudes Towards Appearance Questionnaire Information subscale; SATAQ-P = Pressures subscale; SATAQ-IG = Internalization-General subscale; SATAQ-IA = Internalization-Athlete subscale.

Table 6 Internalization-Athlete Subscale

	SATAQ-IA (9 items)	
Independent Variables	**M**	**SD**
Thin Advertisements	3.40	1.05
Average Advertisements	3.42	0.94
Neutral Advertisements	3.37	1.07
Normal BMI	3.30	0.99
Overweight BMI	3.37	1.07
Obese BMI	3.71	0.91

Note. SATAQ-IA = Sociocultural Attitudes Towards Appearance Questionnaire Internalization-Athlete subscale.

Table 7 Body Mass Index vs. Body Fat Percentage

		*Sig. of F***	
		BMI	**Body Fat %**
TEQ	Condition	0.037*	0.020*
	Weight	0.233	0.747
	Interaction	0.534	0.718
SATAQ-3	Condition	0.430	0.352
	Weight	0.763	0.117
	Interaction	0.621	0.565

Note. TEQ = Thinness Expectancy Questionnaire; SATAQ-3 = Sociocultural Attitudes Towards Appearance Questionnaire.

*$p < .05$

**The Omron Body Logic was unable to calculate percentage of body fat for 3 participants. Therefore, BMI has an *n* of 105 and body fat percentage has an *n* of 102.

Table 8 Response Time One-way ANOVA

	SS	*df*	*MS*	*F*
Between Groups	46366.39	2	23183.19	5.496*
Within Groups	430264.4	102	4218.278	
Total	476630.8	104		

* $p < .05$.

Table 9 Response Time Multiple Comparisons

Condition (I)	*Condition (J)*	*Mean Difference (I-J)*	*Standard Error*
thin	average	-48.68*	15.00
	neutral	-14.52	15.86
average	thin	48.68*	15.00
	neutral	34.17	15.96
neutral	thin	14.15	15.86
	average	-34.17	15.96

* $p < .05$.