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**Believing the Thin-Ideal is the Norm Promotes Body Image Concerns:  
Beauty is “Thin” Deep?**

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**Believing the Thin-Ideal is the Norm Promotes Body Image Concerns:  
Beauty is “Thin” Deep?**

**by**

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## **Dedication**

To My Beloved and Beshert, Ted von Hippel, Ph.D.,

And to the Countless Women Who I Hope Benefit From This Research

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# **Believing the Thin-Ideal is the Norm Promotes Body Image Concerns: Beauty is “Thin” Deep?**

Publication No. \_\_\_\_\_

Pamela Gayle Krones, Ph.D.  
The University of Texas at Austin, 2008

Supervisor: Rebecca Bigler

**Objective:** Although studies have demonstrated that the media-portrayed thin-ideal images and social comparison processes increase body dissatisfaction and negative affect, research has not tested whether women experience pluralistic ignorance by believing that the thin-ideal is an achievable norm. **Method:** In Study 1, 172 women completed a questionnaire that assessed the extent to which a participant believed that the thin-ideal body image represented the normative body size among women. In Study 2, 356 women participated in a five condition experiment that manipulated the body size of an attractive college student (i.e., thin-ideal or average-sized) and information about the achievability of the woman’s body size (i.e., achievable, not achievable, or no information). **Results:** Study 1 found no evidence that thin-ideal norm endorsement affected body dissatisfaction or negative affect. Study 2 revealed an increase in body dissatisfaction but not negative affect in the thin-ideal achievable and thin-ideal no information conditions. The results also indicated a marginally significant decrease in

negative views of the self in the average-sized achievable and average-sized no information conditions. Furthermore, participants with low self-esteem or poor social support felt better in the average-sized achievable condition when compared to the thin-ideal achievable condition. Also, participants with a higher BMI felt more depressed in the thin-ideal achievable condition when compared to the average-sized achievable condition. **Discussion:** Results suggest that thin-ideal norm endorsement increased body dissatisfaction by way of social comparative processes and perhaps, pluralistic ignorance. Because participants with low self-esteem or poor social support felt better after seeing an average-sized peer who was said to be the achievable ideal, these results have implications for clinical treatment and prevention interventions.

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# Chapter 1

## Introduction

According to the National Eating Disorders Association (2002), up to 11 million Americans suffer from eating disorders annually, the overwhelming majority of whom are female. The lifetime prevalence among females who suffer from bulimia is estimated at 1.1 to 4.2 percent, and for anorexia, 0.5 to 3.7 percent (National Institute of Mental Health [NIMH], 2001). Moreover, the mortality rate of females suffering from anorexia is estimated at 0.56 percent per year, which is approximately 12 times higher than the annual death rate from all other causes of death among females 15 to 24 years old (NIMH, 2001). Examples of these statistics are poignant. In August 2006, a 22 year-old Uruguayan model died of anorexia-related heart failure during a fashion show as she was changing outfits, and three months later, in November 2006, a Brazilian model also died of complications related to anorexia (Glyde, 2007; Patterson, 2007).

What would drive young, healthy women to engage in such unhealthy and sometimes fatal behaviors? Research indicates that body image and affective disturbances are risk factors for eating pathology and are at least partially responsible for these destructive behaviors. Longitudinal studies have found that children who perceive themselves as less attractive experience an increase in depressive symptoms (Cole, Martin, Peeke, Seroczynski, & Hoffman, 1998), and adolescent girls who are dissatisfied with their bodies are at an increased risk for the onset of subsequent depression (Rierdan, Koff, & Stubbs, 1989; Stice, Hayward, Cameron, Killen, & Taylor, 2000). Moreover,

prospective studies show that adolescent girls who feel highly negative about their bodies are more likely to develop an eating disorder (Attie & Brooks-Gunn, 1989; Graber, Brooks-Gunn, Paikoff, & Warren, 1994), as are those who are not only dissatisfied with their bodies but are preoccupied with their weight (Killen et al., 1994, 1996). Hence, prospective research indicates that dieting and experiences of negative affect among adolescent girls predict the onset of binge behavior as well as full-blown bulimic symptoms (Stice & Agras, 1998; Stice, Killen, Hayward, & Taylor, 1998).

### **SOCIAL COMPARISON AND BODY IMAGE**

Because of the serious consequences of body dissatisfaction, it is important to identify the factors that contribute to the rise of these disturbances. Theoretically, an important quality of human interaction is that we relate our own features to others. That is, we engage in social comparisons to others in order to understand how and where we fit in the world (Festinger, 1954). Research reveals that individual differences determine the extent to which people compare themselves with others and how they interpret those comparisons (Buunk & Mussweiler, 2001). Individuals with low self-esteem, for example, tend to feel better when they compare themselves with similar people (Gibbons & McCoy, 1991) or those whose circumstances are perceived as worse (Aspinwall & Taylor, 1993). Moreover, when making social comparisons to role models, individuals experience self-enhancement and inspiration when they believe they can obtain the same success, yet experience self-deflation when they believe that similar success is unattainable, especially if they perceive their own abilities as fixed and unlikely to improve (Lockwood & Kunda, 1997).

Importantly, sociocultural pressures have exacerbated our natural tendencies to compare ourselves to others and have served as negative risk factors for body image and affective disturbances. Research suggests that the media's portrayal of the ultra slender body as the ideal image of beauty promotes body dissatisfaction and subsequent eating disturbances among young women (Levine & Smolak, 1996; Striegel-Moore, Silberstein, & Rodin, 1986). That is, women often compare themselves to women with thin-ideal bodies and then feel badly about their own weight and shape. Theoretically, this is accomplished through the social comparison process. Posavac, Posavac, and Posavac (1998) suggest that the effect of media exposure on women's body dissatisfaction comes from a social comparison process in which women judge their own appearance relative to the sociocultural standard depicted by the media-portrayed images of beautiful women. Continual exposure to ultra thin models creates an internalization of the thin-ideal body image, which then contributes to body dissatisfaction in women. Internalizing the thin-ideal promotes body dissatisfaction because of the social comparison process in which women compare themselves to idealized images and subsequently believe they fall short of these social and cultural standards. Repeated exposure to the thin-ideal images by the media may also foster body dissatisfaction by changing normative perceptions of the average body dimensions of women. It is believed that body dissatisfaction then promotes dieting and negative affect, which in turn increase the risk for bulimic symptoms (Stice, Ziemba, Margolis, & Flick, 1996).

Research studies have demonstrated that the sociocultural pressure of media-portrayed thin-ideal images fosters body dissatisfaction and eating disturbances. A prospective study indicated that girls who endeavored to look like the women portrayed



in the media became more concerned with their weight than their peers (Field et al., 2001). Moreover, a prospective cohort study found that adolescent girls who reported trying to look like the women who appear in magazines, movies, or television subsequently developed eating disorders more often than peers who did not have such aspirations (Field, Camargo, Taylor, Berkey, & Colditz, 1999). Furthermore, the more a young girl's peers glorified thinness, the more likely she was to vomit and use laxatives to control her weight (Field et al., 1999). Another study found magazine-reading to be a more powerful predictor of eating disorder symptomatology than television viewing, specifically when the magazine images reflected the thin-ideal (Harrison & Cantor, 1997).

The link between the presentation of thin-ideal images and body image dissatisfaction has also been shown in experimental work. Stice & Shaw (1994) found that women exposed to magazine pictures of ultra-thin models, as opposed to average-sized models or no models, experienced a host of negative emotions including depression, stress, guilt, shame, insecurity, and body dissatisfaction. The resulting negative affect, body dissatisfaction, and internalization of the thin-ideal then correlated with bulimic symptoms (Stice & Shaw, 1994). Similarly, a correlational study examining the relation between media-portrayed images of the thin-ideal in magazines and television programs suggested that internalization of sociocultural pressures to be thin mediated the adverse effects of the thin-ideal (Stice, Schupak-Neuberg, Shaw, & Stein, 1994). Likewise, a correlational study found that thin-ideal images in advertising raised social comparison standards for attractiveness and lowered one's own sense of attractiveness (Richins, 1991).

Additionally, experimental and prospective studies have found that women who internalize the thin-ideal and perceive a societal pressure to be thin, tend to suffer from the cascading effects of body dissatisfaction, dieting, and negative affect that lead to bulimic behavior (Stice & Agras, 1998; Stice, Mazotti, Weibel, & Agras, 2000). In an experimental study, even women without eating disorder symptoms who looked at fashion models matching the thin-ideal and who compared their own bodies to the models, reported lower self-esteem and body dissatisfaction (Wilcox & Laird, 2000). Moreover, Cattarin, Thompson, Thomas, & Williams (2000) found that women experienced greater anger, anxiety, and depression when they were exposed to media images reflecting our cultural biases toward thinness than when they were exposed to attractive women who did not represent the thin sociocultural ideal. A correlational study also found that acute exposure to media images embracing the thin-ideal likewise deteriorated body image satisfaction and feelings of sexiness and attractiveness (Ogden & Munday, 1996). Even when adolescent girls reported that they felt pressure from parents and friends to lose weight, they reported still greater pressure to be thin from sociocultural pressure, specifically, the media (Wertheim, Paxton, Schutz, & Muir, 1997). Furthermore, in a telling experimental study that looked at mood and body dissatisfaction, Heinberg & Thompson (1995) found evidence of potentiating moderating factors: High levels of thin-ideal internalization and body image disturbance lead to depression and body dissatisfaction.

In addition to social comparison processes, women may experience direct and indirect pressure from family members to achieve the thin-ideal (Irving, 1990). Such pressure may be associated with body dissatisfaction and eating pathology. For example,

mothers of girls who exhibited disordered eating not only rated their own daughters as less attractive than the girls rated themselves, but they also put pressure on their daughters to lose weight (Pike & Rodin, 1991). In contrast, prospective research indicates that adolescent girls who have positive relationships with their parents have healthier eating habits (Swarr & Richards, 1996).

In addition to sociocultural pressures stemming from media portrayals and family pressure, adolescent girls, as well as women in general, often report feeling pressure to be thin by their peers (Irving, 1990). A correlational study found that although both men and women erroneously estimate what the other sex perceives as attractive, the way in which men perceive attractiveness tends to keep them happy with their bodies, whereas women feel pressure to lose weight and match the thin-ideal (Fallon & Rozin, 1985). Moreover, adding negative social interactions, such as teasing or other negative verbal commentary, often leads to body dissatisfaction (Cattarin & Thompson, 1994; Levine, Smolak, & Hayden, 1994) and adversely affects the way in which bulimic sufferers perceive of themselves socially, lowering their mood and self-concept (Steiger, Gauvin, Jabalpurwala, Seguin, & Stotland, 1999). Importantly, social comparison processes have been found to mediate the effect of teasing on body image and eating disturbance (Thompson, Covert, & Stormer, 1999). This kind of peer pressure may have particularly insidious effects: An experimental study found that exposure to attractive peers resulted in greater body dissatisfaction than exposure to attractive models (Cash, Cash, & Butters, 1983).

Sociocultural pressures that even *implicitly* suggest that women, who are interacting with peers, are not thin enough foster body dissatisfaction (Krones, Stice,

Batres, & Orjada, 2005; Stice, Maxfield, & Wells, 2003). In the Stice et al. (2003) study, a thin, attractive woman who implied that she was overweight left participants feeling greater body dissatisfaction. Likewise, Krones et al. (2005) found that women experienced an increase in body dissatisfaction when they compared themselves with a live, attractive confederate who embodied the thin-ideal.

### **CULTURAL NORMS, PLURALISTIC IGNORANCE, AND THE THIN-IDEAL**

In light of the tendency for women to engage in the social comparative process with other women (live and symbolically) and experience pressure to be thin, it would be helpful to understand how they perceive the thin-ideal. In a correlational study that focused on the connection between social comparison theory and the media-portrayed thin-ideal body image, Botta (1999) reported that media images accounted for 17% of the variance for body dissatisfaction, 16% for bulimic behaviors, and 33% for thin-ideal internalization. Botta states that, theoretically, these findings suggest that researchers must first understand *how* young women process and internalize body image in order to understand *why* and how media images of the thin-ideal affect their body image, attitudes about food, and eating behaviors. Likewise, past research has approached eating disorders and body image by accepting the thin-ideal as the norm but has not yet focused on the way in which women perceive this so-called norm. For the purposes of this study, “norm” is defined as “a standard or model or pattern regarded as typical” (WordReference.com Dictionary, 2005).

In order to address the role of cultural norms in producing eating pathology, a number of recent studies have examined the topic among non-western women. One

study, for example, compared the eating habits and body image responses of American and South African female students (Senekal, Steyn, Mashego, & Nel, 2001). The authors found that South African black females experienced significantly less body dissatisfaction than American women, with a lower prevalence rate of eating disorders as well. Similarly, Heesacker, Samson, and Shir (2000) found fewer Israeli women with eating disorders and significantly lower body dissatisfaction than their American counterparts. The authors of such studies typically attributed cultural differences in the rates of body dissatisfaction and eating disorders to a difference in the cultural norms for women's weight and body shape. Comparing Western and non-western cultural norms of body image does not, however, provide conclusive evidence of the role of thin-ideal norms in the etiology of body dissatisfaction.

The dearth of literature about the perception of cultural body image norms leaves us with a gap in our knowledge of the etiology of body dissatisfaction. Research indicates that women become dissatisfied with their bodies at the sight of women who fit the thin-ideal. Why? Do women perceive the thin-ideal as an exceptional, unattainable body type that they strive for anyway? Or do they perceive the thin-ideal as a norm that is reasonable and achievable by every woman, and so, do they perceive that they fall short of the thin-ideal while others are able to attain it? That is, do women who experience body dissatisfaction at the sight of the thin-ideal believe that they have not attained a norm that actually is not the norm? Literature on pluralistic ignorance may help us answer these questions.

Pluralistic ignorance is the mistaken belief that individuals have that their perceptions, feelings, and beliefs differ from those of their peers. Prentice and Miller

(1993) demonstrated that individual college students perceive that the average college student prefers to drink more than they do, even though in reality, they actually prefer the average number of drinks. The authors suggest that pluralistic ignorance has the negative consequences of perpetuating unsupported or weakly supported social norms, and that it may actually encourage individuals to conform to their mistaken idea of the norm (Prentice & Miller, 1993; Miller & Prentice, 1994; Miller & McFarland, 1991). That is, individuals may change their behavior to conform to a norm that is not actually a norm.

Researchers have found pluralistic ignorance in other situations as well. One study discovered that the staff and inmates of a prison held very similar private opinions even though most individuals believed that their opinions were less popular than the group's (Grekul, 1999). Another study found that college students rated their peers as being more comfortable engaging in non-committed sexual relationships than they rated themselves, with the result that everyone overestimated the average comfort level of their peers (Lambert, Kahn, & Apple, 2003).

Importantly, no research has looked at the "norm" of the thin-ideal through the lens of pluralistic ignorance. It may, however, be fruitful to approach the etiology of body dissatisfaction through this path. Is the norm of the thin-ideal indeed a norm? Do women recognize that the thin-ideal can be achieved by less than 1% of the population but nevertheless try to attain it? Or do women perceive the thin-ideal as the norm that they should be able to attain? And do they believe that their peers believe it is an actual norm that is attainable?

Theoretically, pluralistic ignorance applied within the domain of body image suggests that women who believe that the thin-ideal is the achievable normal body shape

and who simultaneously do not conform to the thin-ideal will, as a consequence, feel badly about themselves and their own bodies. What, then, are the body dimensions of the average American woman and the thin-ideal body shape? That is, how thin is “thin?” According to the National Institutes of Health (2004), a healthy weight for American adults ranges from a Body Mass Index (BMI) of 18.5 to 25. The average American woman is 5’4” tall and weighs 140 lbs (Levine & Smolak, 1996). This comes to a BMI of 24, which falls in the upper region of a healthy BMI.

The thin-ideal, represented by the ultra slender model, appears to have less specific dimensions. Research indicates that magazine and television images convey standards of thinness that are thinner for women than for men, and thinner now than in the past (Silverstein, Perdue, Peterson, & Kelly, 1986; Wiseman, Gray, Mosimann, & Ahrens, 1992). Even the mainstream media has recognized the shrinking standards of thinness that have pervaded media images of women. A popular magazine noted that in 2004, elite runners averaged 5’5” and 117 lbs (BMI = 19.5), Miss America pageant winners averaged 5’6.5” and 120 lbs (BMI = 19.1), the *Playboy* Playmate of the Year was 5’7.7” and weighed 120 lbs (BMI 18.6), and fashion models averaged 5’9” and 120 lbs (BMI 17.7; Stacey, 2004). Hence, with a BMI falling below the healthy guideline of 18.5, the average fashion model is underweight. If women emulate the ultra slender model, an image that has become ubiquitous in all forms of the media, and if they then convey pluralistic ignorance by believing that the thin-ideal is the normal body shape, then women will feel badly about their own bodies for not being unhealthily underweight.

In order to examine whether pluralistic ignorance and thin-ideal norm endorsement (i.e., the belief that the thin-ideal body image is the normative body size

among women) contribute to women's body dissatisfaction and negative affect, I conducted two studies. In Study 1, participants completed a questionnaire that directly asked them if they believed that the media-portrayed thin-ideal image was the norm (rather than the exception) of body sizes among women. In Study 2, I experimentally manipulated the body size of a picture of an attractive student as well as the information provided to participants about the achievability of the student's body size. Specifically, women were provided with information indicating that (a) most people think that a slender, thin-ideal woman embodies the normative body shape, (b) most people think that a slender, thin-ideal woman is *not* the normative body shape, (c) most people think that a woman of average height and weight represents the norm, or (d) no information about other people's beliefs, but exposure to a picture of a thin-ideal or average-sized woman with her height and weight provided. The physical dimensions of the thin-ideal woman were 5'8" and 122 lbs, for a BMI of 18.5, which represented the lowest range of a healthy BMI and thus a healthy weight. In contrast, the body shape of the average-sized woman matched the dimensions of the average American woman at 5'4", 140 lbs, with a BMI of 24 (Smolak, Levine, & Striegel-Moore, 1996).

## **HYPOTHESES**

Current literature suggests but has yet to demonstrate that women perceive the thin-ideal as an achievable norm and, as a consequence of pluralistic ignorance and social comparison processes, come to feel badly about their own bodies. I predicted, therefore, that when directly asked about the media-portrayed ultra slender body image, women would endorse the belief that women who embody the thin-ideal image portrayed by the



media represent the norm rather than the exception of body size among women. Women who endorsed the thin-ideal body image as the normative body size among women would then indicate greater body dissatisfaction and negative affect.

I further predicted that women exposed to a picture of a college student who physically embodies the thin-ideal, along with information that she represents an ideal that most people believe is achievable, would perceive themselves as failing to conform to the norm of body dimensions of women, and would thus feel unhappy and dissatisfied with their own body shape and weight. In contrast, women presented with a picture of a college student who is the same body dimensions as the average woman, along with information that she represents an ideal that most people believe is achievable, would perceive themselves as conforming to the norm of body dimensions of women, and would thus feel happier and more satisfied with their own body shape and weight.

I also predicted that these main effects would be moderated by certain individual difference factors. A woman's own BMI would likely play either a potentiating or mitigating factor. That is, BMI would likely increase negative affect and body dissatisfaction for overweight women but diminish these outcomes in women who were already fairly thin. Moreover, women who internalize the thin-ideal as the standard by which they judge themselves may be more likely to feel dissatisfied with their own body following exposure to a picture of a thin-ideal peer. A number of studies suggest that the adverse effects of exposure to media-portrayed thin-ideal body images manifest stronger for individuals with higher thin-ideal internalization (Cattarin et al., 2000; Heinberg & Thompson, 1995; Posavac et al., 1998; Stice, Spangler, & Agras, 2001). In contrast,

women with greater thin-ideal internalization may feel better about their bodies following exposure to a picture of an average-sized peer.

In addition, self-esteem may have an impact on the social comparison process in this experiment, as women with low self-esteem may be more vulnerable to the picture of a thin-ideal college peer, and so, feel worse about their own body. Research has suggested that individuals with low self-esteem may feel better when they compare themselves with similar people (Gibbons & McCoy, 1991) or those whose circumstances are perceived as worse (Aspinwall & Taylor, 1993). Hence, participants with low self-esteem would be more likely to experience greater body dissatisfaction and negative affect after comparing themselves with a thin-ideal peer. Likewise, theoretically, participants with low self-esteem would be more likely to feel better about their bodies and show a less negative mood after comparing themselves with an average-sized peer.

I also anticipated that social support, which is the strength of each participant's relationships with family and friends as well as the amount of support participants receive, would serve as a potentiating or mitigating factor. Women with weaker or less social support may be more vulnerable to the social comparison process and thus may show greater body dissatisfaction than participants with stronger social support. Stice et al. (2001) found a link among social support and body dissatisfaction such that adolescent girls without adequate social support indicated increased body dissatisfaction, dieting, and bulimic symptoms. In this experiment, I predicted that women with poor social support would experience greater body dissatisfaction and negative affect after exposure to a picture of a thin-ideal peer, but that they would feel better about themselves and their body shape and weight after viewing a picture of an average-sized peer.

Furthermore, sociocultural pressure to be thin that women may perceive from the media, family, friends, dating partners, or peers may also moderate the main effects, because women who absorb the pressure to be thin that comes from their environment may be more vulnerable to its adverse effects. Those who sense pressure to be thin from sociocultural influences may experience greater body dissatisfaction and negative affect after viewing a picture of a thin-ideal peer. Likewise, women who perceive sociocultural pressure to be thin may feel better about their bodies and show a less negative mood after exposure to a picture of an average-sized peer. Research studies that have found a connection between sociocultural pressure to be thin and greater body dissatisfaction and negative affect provide encouragement that this study may find interactions among these variables (Cattarin et al., 2000; Heinberg & Thompson, 1995; Krones et al., 2005; Stice et al., 2001).

## **Chapter 2**

### **Method: Study 1**

#### **PARTICIPANTS**

Participants for Study 1 consisted of 172 female undergraduates from the pool of Introduction to Psychology students or an upper division psychology course at the University of Texas at Austin, a large public university. For their participation, students either received research credit to satisfy a course requirement or volunteered to participate during a psychology class. They ranged in age from 18 to 30 with a mode of 19. The sample included 11.6% Asians, 6.4% Blacks, 13.4% Hispanics, and 66.3% Caucasians. Of the total sample, 2.3% indicated that they were from “other” or mixed racial heritages.

#### **PROCEDURE**

Individuals participated in the experiment according to the following procedures, with most individuals participating within a small group of six or fewer women. The experimenter welcomed the participants into an experimental room, explained that the study was exploring body image and mood, and asked the participant to sign an informed consent form. The experimenter informed participants that they would be asked to fill out a survey that took 15-20 minutes to complete. After signing the informed consent form, each participant completed a questionnaire that assessed the extent to which a participant believed that the thin-ideal body image represented the normative body size

among women. The questionnaire requested demographic information and the height and weight of each participant, and it also measured body dissatisfaction and negative affect. Furthermore, the questionnaire assessed each participant's thin-ideal internalization, self-esteem, perceived social support, and perceptions of sociocultural pressure to be thin. Once the participants completed the questionnaire, the experimenter concluded the experiment and thanked everyone for participating.

## **MEASURES**

**Thin-Ideal Norm Endorsement.** To measure the extent to which participants believe that the thin-ideal is the normative body size among women, I created a new measure, the Beliefs in Body Size Norms scale, which directly asks how much a participant believes that women who embody the thin-ideal body image fit the norm rather than the exception of body size among women. The Beliefs in Body Size Norms scale is a seven-item instrument that includes statements such as “a woman who is 5’8” and weighs 122 lbs represents the reasonable, achievable, ideal attractive UT student.” Participants rated each statement on a 5-point scale ranging from “strongly disbelieve” to “strongly believe.” See Appendix A for the complete scale.

**Body image concerns.** I measured each participant's level of body dissatisfaction with an adapted form of the Satisfaction and Dissatisfaction with Body Parts Scale (Berscheid, Walster, & Bohmstedt, 1973). Participants rated their current level of satisfaction with 15 body parts (e.g., waist, hips, thighs) on a 5-point scale ranging from “extremely dissatisfied” to “extremely satisfied.” This scale has good

internal consistency ( $\alpha = .94$ ), temporal reliability (3-week test-retest  $r = .90$ ), and predictive validity (Stice, 2001).

**Negative affect – PANAS.** I assessed negative mood using the 26 negative items from the Positive Affect and Negative Affect Schedule Revised (PANAS-X; Watson & Clark, 1992). For each word or phrase (e.g., sad, depressed, ashamed, angry, disgusted), participants rated how they currently felt on a 5-point scale ranging from “very slightly or not at all” to “extremely.” The PANAS-X has good internal consistency ( $\alpha = .95$ ), test-retest reliability, convergent validity, and predictive validity (Watson & Clark, 1992).

**Negative affect – BDI.** In addition to the PANAS-X, which contains items that may not be related to eating pathology, I included another, different measure of negative affect. Hence, participants also completed the short form of the Beck Depression Inventory (BDI; Beck, Steer, & Garbin, 1988), a 13-item scale that assesses constructs such as unhappiness, guilt, and self-dislike (e.g., “I feel sad or blue,” “I feel quite guilty,” and “I am disappointed in myself.”). The short form of the BDI has strong internal consistency ( $\alpha = .84$ ), test-retest reliability (ranging from .60 to .83), and convergent and discriminant validity (Beck et al., 1988).

**Thin-ideal internalization.** I assessed the degree to which each participant internalized the thin-ideal with the Ideal-Body Stereotype Scale-Revised (IBSS-R; Stice, 2001) which includes eight statements about what attractive women look like (e.g., “Slender women are more attractive”). Participants rated their level of agreement with each statement using a 5-point scale ranging from “strongly agree” to “strongly disagree.” The IBSS-R has good internal consistency ( $\alpha = .91$ ), test-retest reliability

( $r = .80$ ), predictive validity, and convergent and discriminant validity (Stice & Agras, 1998; Stice et al., 1996).

**Self-esteem.** To obtain a global level of each participant's self-esteem, that is, a participant's attitudes about general self-worth, I used the Rosenberg Self-Esteem (RSE) scale (Rosenberg, 1979), a nine-item measure that rates self-esteem through statements such as "I do not have much to be proud of" and "I have a positive attitude towards myself." Participants rated each item on a 5-point scale ranging from "strongly agree" to "strongly disagree." The RSE has satisfactory internal consistency ( $\alpha = .82$ ), temporal reliability (test-retest  $r = .87$ ), and convergent validity (Demo, 1985, Rosenberg, 1979).

**Social support.** To assess the strength of each participant's relationships with their family and friends and the amount of support participants receive, I used the Network of Relationships Inventory, a scale that assesses companionship, guidance, intimacy, affection, admiration, and reliable alliance from parents and peers. The twelve-item instrument includes statements such as "my parents really care about me" and "my friends treat me with respect and admiration." Participants rated each statement on a 5-point scale ranging from "strongly disagree" to "strongly agree." This inventory has good internal consistency ( $\alpha = .89$ ), test-retest reliability (1-month test-retest  $r = .69$ ), and convergent and criterion validity (Furman & Buhrmester, 1985; Furman, 1996).

**Perceived sociocultural pressure to be thin.** I measured the amount of pressure that participants perceive from peers, family members, dating partners, and the media through the Perceived Sociocultural Pressure Scale, an adapted eight-item scale. Participants responded to items such as "I've perceived a strong message from my family

to have a slender figure,” on a 5-point scale ranging from “none” to “a lot.” This scale has acceptable internal consistency ( $\alpha = .88$ ), 2-week test-retest reliability ( $r = .93$ ), and predictive validity (Stice & Agras, 1998; Stice, 2001).

**Body mass index.** I measured each participant’s body mass index (BMI) by collecting the self-reported height and weight of each participant. Previous studies have found that among both adolescents and adults, self-reported height and weight correlates highly with actual height and weight, with correlations ranging from .92 to .99 (Attie & Brooks-Gunn, 1989; Stice et al., 2001; Field et al., 2001). Research studies have also established the temporal reliability, convergent validity, and criterion validity of the BMI (Garrow & Webster, 1985; Kraemer, Berkowitz, & Hammer, 1990; Stice, Cameron, Killen, Hayward & Taylor, 1999).



## **Chapter 3**

### **Results: Study 1**

#### **OVERVIEW**

The primary purpose of Study 1 was to examine the effects of believing that thinness is normative on women's body dissatisfaction and negative affect. First, I calculated descriptive statistics on the measure created to assess beliefs in body size norms, looking specifically at whether women endorsed the thin-ideal as the normative body size among women. I then ran a correlational analysis to examine the relation of thin-ideal norm endorsement to body dissatisfaction, negative affect (i.e., PANAS and BDI), and potential moderator variables (thin-ideal internalization, self-esteem, perceived social support, perceived sociocultural pressure to be thin, and BMI). Next, I examined whether thin-ideal internalization, self-esteem, perceived social support, perceived sociocultural pressure to be thin, and BMI moderated the effect of thin-ideal norm endorsement on women's body dissatisfaction and negative affect.

#### **THIN-IDEAL NORM ENDORSEMENT**

The Beliefs in Body Size Norms measure asked participants how much they believe that women who embody the thin-ideal fit the norm rather than the exception of body size among women. The measure also included belief statements about the body size of the reasonable, achievable, ideal attractive woman. I ran descriptive statistics on the measure's items, and the results showed acceptable internal consistency, with a

Cronbach’s Alpha of .74. Using a scale of 1 to 5, high scores equaled personal belief in the thin-ideal. Overall, women showed a mean of 2.40 and a standard deviation of 0.64. Hence, collectively, women did not endorse the belief that the thin-ideal is the normative body size among women. Table 1 contains the descriptive statistics for thin-ideal norm endorsement, along with the other variables in this study. Detailed information about participants’ responses to the Beliefs in Body Size Norms scale appears in Appendix B.

**Table 1: Descriptive Statistics for Thin-Ideal Norm Endorsement, Body Dissatisfaction, Negative Affect, Thin-Ideal Internalization, Self-Esteem, Social Support, Sociocultural Pressure to Be Thin, and BMI**

<u>Variable</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>Minimum</u>	<u>Maximum</u>
<b>Thin-Ideal Norm Endorsement</b>	172	2.40	0.64	1.14	3.86
<b>Body Dissatisfaction</b>	172	2.93	0.86	1.13	4.87
<b>Negative Affect – PANAS</b>	172	1.46	0.51	1.00	4.50
<b>Negative Affect – BDI</b>	172	1.30	0.28	1.00	2.54
<b>Thin-Ideal Internalization</b>	172	3.66	0.56	1.88	5.00
<b>Self-Esteem</b>	172	3.94	0.76	1.22	5.00
<b>Social Support</b>	172	4.31	0.63	2.25	5.00
<b>Sociocultural Pressure to be Thin</b>	172	1.81	0.71	1.00	4.63
<b>BMI</b>	172	23.04	3.77	15.98	39.93

## **RELATIONS AMONG THIN-IDEAL NORM ENDORSEMENT, BODY IMAGE, NEGATIVE AFFECT, AND POTENTIAL MODERATORS**

I ran a correlational analysis to examine the relations among participant responses to thin-ideal norm endorsement, body dissatisfaction, negative affect (i.e., PANAS and BDI), and potential moderators thin-ideal internalization, self-esteem, perceived social support, perceived sociocultural pressure to be thin, and BMI. Pearson correlations appear in Table 2. The results showed associations among the body image scores and negative affect scales. Consistent with other research (Heinberg & Thompson, 1995; Krones et al., 2005; Stice et al., 2003; Stice et al., 2001), women who expressed higher dissatisfaction with their bodies indicated higher levels of negative affect on both the PANAS and BDI. As expected, the results also found body dissatisfaction and negative affect significantly correlated with self-esteem, social support, and sociocultural pressure to be thin, such that women who experienced negative affect and felt worse about their bodies also indicated lower self-esteem and perceptions of social support but greater sociocultural pressure to be thin. These findings concur with other research studies (Cattarin et al., 2000; Heinberg & Thompson, 1995; Krones et al., 2005; Stice et al., 2001; Wilcox & Laird, 2000). Moreover, the analysis also showed correlations among thin-ideal internalization and body dissatisfaction, negative affect, self-esteem, and sociocultural pressure to be thin. As other studies have demonstrated (Cattarin et al., 2000; Heinberg & Thompson, 1995; Krones et al., 2005; Posavac et al., 1998; Stice, Mazotti, et al., 2000; Stice et al., 2001), women who internalized the thin-ideal to a greater degree tended to have lower self-esteem, more negative affect, and greater body dissatisfaction and perceptions of sociocultural pressure to be thin.

Contrary to expectations, thin-ideal norm endorsement did not correlate with the key outcome variables of interest: body dissatisfaction and negative affect ( $p$ 's > .05). The correlational analysis indicated, however, that thin-ideal norm endorsement was negatively related to BMI and perceptions of social support, and marginally significantly related to perceptions of sociocultural pressure to be thin ( $p = .053$ ). Because BMI correlated negatively with thin-ideal norm endorsement and positively with sociocultural pressure to be thin, it seemed possible that BMI may have been suppressing a significant correlation between thin-ideal norm endorsement and sociocultural pressure to be thin. In order to investigate this possibility, I used a regression analysis to examine the relationship between these two variables while controlling for BMI. The results indicated that when controlling for BMI, thin-ideal norm endorsement significantly predicted sociocultural pressure to be thin,  $\beta = .17$ ,  $p < .05$ . Hence, when controlling for a participant's body size, women who endorsed the belief that the thin-ideal is the normative body size also perceived greater sociocultural pressure to be thin. Because of this result, I repeated this regression analysis in order to examine the relationship between the thin-ideal norm endorsement and each of the other variables while controlling for BMI. Other than perceptions of social support, which had already correlated significantly with thin-ideal norm endorsement, none of the other variables emerged as significantly related to thin-ideal norm endorsement in these analyses (all  $p$ 's > .05).

### **POSSIBLE MODERATORS**

I ran a series of hierarchical regression analyses in order to examine whether thin-ideal norm endorsement affected the body dissatisfaction and negative affect of women

differently as a function of thin-ideal internalization, self-esteem, perceptions of social support, perceptions of sociocultural pressure to be thin, and BMI. Specifically, I ran separate regression models using (a) body dissatisfaction, (b) PANAS, and (c) BDI scores as the dependent variables.

In Step 1 of the models, I entered the thin-ideal norm endorsement variable and a potential moderator (i.e., thin-ideal internalization, self-esteem, perceptions of social support, perceptions of sociocultural pressure to be thin, or BMI). In Step 2, I entered these main effects along with the interaction term, computed by multiplying the centered thin-ideal norm endorsement variable by the centered potential moderator variable (*see* Aiken & West, 1991).

*Body image concerns.* With body dissatisfaction as the dependent variable, the results failed to reveal moderation of thin-ideal norm endorsement by any of the potential moderators (all  $p$ 's > .05).

*Negative Affect.* With the PANAS scores as the dependent variable, the results failed to reveal moderation of thin-ideal norm endorsement by any of the potential moderators (all  $p$ 's > .05). Likewise, with the BDI scores as the dependent variable, the results failed to reveal moderation of thin-ideal norm endorsement by any of the potential moderators (all  $p$ 's > .05).

**Table 2: Correlations Among Study Variables**

	Thin-Ideal Norm Endorsement	Body Dissatisfaction	Negative Affect PANAS	Negative Affect BDI	Thin-Ideal Internalization	Self-Esteem	Social Support	Sociocultural Pressure to Be Thin	BMI
Thin-Ideal Norm Endorsement	1.00	0.06	0.04	0.10	0.10	-0.10	-0.22**	0.15	-0.15*
Body Dissatisfaction		1.00	0.39**	0.43**	0.23**	-0.52**	-0.17*	0.54**	0.42**
Negative Affect PANAS			1.00	0.76**	0.08	-0.63**	-0.46**	0.26**	0.08
Negative Affect BDI				1.00	0.17*	-0.70**	-0.46**	0.35**	0.08
Thin-Ideal Internalization					1.00	-0.15*	0.03	0.27**	-0.04
Self-Esteem						1.00	0.49**	-0.38**	-0.05
Social Support							1.00	-0.26**	-0.05
Sociocultural Pressure To Be Thin								1.00	0.39**
BMI									1.00

Note: \*\* Statistically significant correlations at the 0.01 level (2-tailed)

\* Statistically significant correlations at the 0.05 level (2-tailed)

## **Chapter 4**

### **Discussion: Study 1**

In Study 1, I explored the effects of believing that the thin-ideal body image was the normative body size among women by surveying women about their beliefs about body size, along with assessments about their level of body dissatisfaction, negative affect, thin-ideal internalization, self-esteem, perceived social support, and perceptions of sociocultural pressure to be thin. To serve this purpose, I created the Beliefs in Body Size Norms scale, a measure designed to assess the extent to which women endorsed the thin-ideal body image as normative by directly asking them if they believed that the thin-ideal body image portrayed by the media was the norm rather than the exception of body size among women. The scale also included belief statements about the body size of the reasonable, achievable, ideal attractive woman.

The correlational analysis among the different measures showed promising results, with findings similar to those demonstrated in other studies. Consistent with findings in Heinberg and Thompson (1995), Kronen et al. (2005), Stice et al. (2003), and Stice et al. (2001), the results in Study 1 indicated that women who felt worse about their bodies also showed higher levels of negative affect. In addition, the results revealed that women who experienced negative affect and greater dissatisfaction with their bodies also indicated lower self-esteem and perceptions of social support but greater sociocultural pressure to be thin. This finding is similar to other studies that have reported a connection among negative affect, body dissatisfaction, and low self-esteem (Wilcox &

Laird, 2000), perceptions of low social support by family and friends (Stice et al., 2001), and greater sociocultural pressure to be thin (Cattarin et al., 2000; Heinberg & Thompson, 1995; Krones et al., 2005; Stice et al., 2001). Moreover, concurring with other research studies (Cattarin et al., 2000; Heinberg & Thompson, 1995; Krones et al., 2005; Posavac et al., 1998; Stice, Mazotti, et al., 2000; Stice et al., 2001), the results in Study 1 indicate that women who internalized the thin-ideal to a greater degree tended to have lower self-esteem, more negative affect, greater body dissatisfaction, and greater perceptions of sociocultural pressure to be thin than women who internalized the thin-ideal to a lesser degree.

The findings for thin-ideal norm endorsement, however, and its relations to the other variables produced mixed results. When controlling for a participant's own body size, women who endorsed the thin-ideal as the normative body size perceived greater sociocultural pressure to be thin. Likewise, women who endorsed the thin-ideal as a norm reported less social support among family and friends. These results are consistent with those of previous studies that found a link among the social comparison process and sociocultural pressure to be thin (Cattarin et al., 2000; Heinberg & Thompson, 1995; Irving, 1990; Krones et al., 2005; Posavac et al., 1998; Stice et al., 2003; Wertheim et al., 1997) and perceived social support (Wertheim et al., 1997). Unexpectedly, the results did not reveal effects of thin-ideal norm endorsement on any of the other measures, including the two variables of primary interest: body dissatisfaction and negative affect. Moreover, participants did not—at the group level—generally endorse the belief that the thin-ideal is the normative body size among women.



The lack of effects of thin-ideal norm endorsement on body dissatisfaction, negative affect, thin-ideal internalization, and self-esteem is surprising given the number of studies that suggests a link between these variables and believing that the thin-ideal body size is the normative body size of women. Research has demonstrated that internalizing the thin-ideal provokes body dissatisfaction and eating disturbances (Levine & Smolak, 1996; Striegel-Moore et al., 1986), and sociocultural pressures that implicitly suggest that women are not thin enough promote body dissatisfaction (Krones et al., 2005; Stice et al., 2003). Moreover, studies have found a link between sociocultural pressure to be thin and negative affect (Cattarin et al., 2000; Stice & Agras, 1998; Stice et al., 2000; Stice & Shaw, 1994).

Perhaps the lack of findings stems from inadequacies in the instrument I created to measure participants' beliefs that the thin-ideal is the normative body size among women. Several facts argue against this interpretation, however. The Beliefs in Body Size instrument had a Cronbach's Alpha of .74, an acceptable internal consistency. Moreover, scores on this scale successfully predicted sociocultural pressure to be thin and a lack of social support, findings that are consistent with other research studies. Perhaps the null finding of thin-ideal norm endorsement overall does not indicate flaws with the measure but instead suggests that participants may have been unwilling or incapable of honestly and accurately responding to the scale items. That is, because the thin-ideal body image is so ubiquitous, and has been steadily getting thinner over the last several decades (Silverstein et al., 1986; Wiseman et al., 1992; Stacey, 2004), women may believe that the thin-ideal is the norm but not recognize that they believe it. According to Nisbett and Wilson (1977), people often cannot accurately introspect about their thoughts

and feelings. As such, participants “may have little or no direct introspective access to complex mental processes such as those involved in judgment, decision making, and the initiation of social behavior” (Nisbett & Bellows, 1977, p. 613).

In light of Nisbett and Wilson’s (1977) research and the lack of results for an effect of thin-ideal norm endorsement on body dissatisfaction and negative affect, a study involving experimental manipulation might facilitate more definitive findings. An experiment has two advantages over a survey and correlational study. First, if participants are unwilling or unable to honestly and accurately assess the degree to which they endorse the thin-ideal normative, an experimental manipulation can circumvent this kind of problem. Instead of directly asking participants what they believe and how they feel, an experiment can manipulate thin-ideal norm endorsement and then measure a participant’s response to the manipulation. Second, an experimental manipulation would place this research in a better position to establish causality between body dissatisfaction and thin-ideal norm endorsement, as well as negative affect and thin-ideal norm endorsement. Moreover, other studies (Cattarin et al., 2000; Heinberg & Thompson, 1995; Irving, 1990; Krones et al., 2005; Posavac et al., 1998; Stice & Shaw, 1994; Stice et al., 2001; Stice et al., 2003; Wilcox & Laird, 2000) have successfully used experimental manipulation to tease out subtle influences on body dissatisfaction and negative affect.

## **Chapter 5**

### **Method: Study 2**

#### **PARTICIPANTS**

Participants for Study 2 consisted of 356 female undergraduates from the pool of Introduction to Psychology students at the University of Texas at Austin, a large public university. For their participation, students received research credit to satisfy a course requirement. They ranged in age from 17 to 33 with a mode of 18. The sample included 16.6% Asians, 5.6% Blacks, 13.2% Hispanics, and 60.1% Caucasians. Of the total sample, 4.5% indicated that they were from “other” or mixed racial heritages. Participants were randomly assigned to one of five experimental conditions. Table 3 summarizes the characteristics of participants in each condition.

#### **OVERVIEW OF PROCEDURE**

All individuals participated in the experiment according to the following procedures, with participants randomly assigned to an experimental condition before the start of the study. Each woman participated on an individual basis. For all conditions, the experimenter welcomed the participant into an experimental room, explained that the study was exploring the average characteristics of UT students, and asked the participant to sign an informed consent form. The experimenter and the consent form informed participants that they would be asked to complete a pretest and posttest and engage in a series of brief activities in between the tests. This and all subsequent parts of the cover

**Table 3: Participant Characteristics Across Conditions**

Condition		Age		College Year		Ethnicity	Paternal Education	Maternal Education
		M	SD	M	SD			
1	Thin-ideal: Achievable	18.48	0.924	1.38	0.724	9 Asian 10 Black 10 Hispanic 39 White 3 Other	1 Grade School Grad. 3 Some High School 13 High School Grad. 9 Some College 19 College Graduate 25 Advanced Degree	2 Grade School Grad. 3 Some High School 8 High School Grad. 20 Some College 22 College Graduate 15 Advanced Degree
2	Thin-ideal: No Information	18.34	0.799	1.26	0.621	14 Asian 1 Black 10 Hispanic 46 White 3 Other	1 Grade School Grad. 4 Some High School 9 High School Grad. 8 Some College 21 College Graduate 31 Advanced Degree	1 Grade School Grad. 2 Some High School 7 High School Grad. 14 Some College 35 College Graduate 15 Advanced Degree
3	Thin-ideal: Not Achievable	18.62	2.052	1.25	0.655	11 Asian 1 Black 10 Hispanic 45 White 1 Other	0 Grade School Grad. 3 Some High School 7 High School Grad. 7 Some College 33 College Graduate 18 Advanced Degree	0 Grade School Grad. 2 Some High School 7 High School Grad. 16 Some College 38 College Graduate 5 Advanced Degree
4	Average-sized: Achievable	18.53	1.222	1.35	0.858	13 Asian 1 Black 7 Hispanic 46 White 5 Other	1 Grade School Grad. 0 Some High School 5 High School Grad. 10 Some College 30 College Graduate 25 Advanced Degree	1 Grade School Grad. 3 Some High School 6 High School Grad. 10 Some College 35 College Graduate 16 Advanced Degree
5	Average-sized: No Information	18.48	1.263	1.30	0.663	12 Asian 7 Black 10 Hispanic 38 White 4 Other	2 Grade School Grad. 5 Some High School 9 High School Grad. 10 Some College 25 College Graduate 19 Advanced Degree	0 Grade School Grad. 1 Some High School 9 High School Grad. 16 Some College 32 College Graduate 13 Advanced Degree

story were necessary to keep participants from knowing the true nature of the study in order to facilitate a natural response to the experimental manipulation.

After signing the informed consent form, participants completed a pretest measure that requested demographic information and assessed body dissatisfaction and negative affect. As part of the cover story, the experimenter asked participants to complete a series of written questions that gathered data about their own activities and those of the average UT student, including (a) number of hours spent studying per week, (b) number of hours employed per week, (c) number of credit hours taken per semester, (d) number of extracurricular activities, (e) number of nights per week spent partying, and (f) number of times per week involved in miscellaneous activities (e.g., movies, concerts, guest lecturers). The activities questionnaire also asked participants to provide the specific classes, type of work, and extracurricular activities in which they were involved. These questions were meant to distract the participant from the content of the pretest and the answers she just provided in it.

Upon completion of the pretest and activities questionnaires, the experimenter showed the participant a photograph of either a thin-ideal woman or an averaged-sized woman, along with her height and weight. Then, depending on the condition, the experimenter either provided no additional information, informed the participant that the woman in the picture represented an achievable ideal, or stated that the woman in the picture did not represent an achievable ideal (*see* Experimental Manipulation). Afterwards, the experimenter asked the participant to write a fashion statement about the woman in the picture. Finally, the participant completed a posttest questionnaire. The

posttest questionnaire included the pretest measures plus five additional measures (*see* Measures) and a request for other information such as the participant's height and weight. Once the participant completed the posttest, the experimenter concluded the experiment by asking the participant what she thought the experiment was investigating. The experimenter then thoroughly debriefed the participant by providing an information sheet that described the true nature of the study and the reasons for deception. Because the study involved deception, the experimenter asked the participant to sign another consent form granting permission to use her data in the analyses. No participants refused. The entire session lasted less than 1 hour.

Because Study 2 included over 350 women who participated on an individual basis for close to an hour, I enlisted the help of five responsible, articulate, and intelligent upper-level female undergraduates to serve as experimenters and run participants. In order to ensure consistency among experimenters, I trained all five research assistants to follow a 5-page script precisely and verbatim with each participant. All experimenters kept a copy of the script attached to a clipboard when they ran participants. Moreover, because this research endeavor explored body image in the context of normative social comparative processes, all experimenters wore a similar "uniform" (black, business casual pants, a white top, and a black sweater, half-way buttoned or zippered from the bottom) and were within normal weight ranges for their height.

## **EXPERIMENTAL CONDITIONS**

Participants were randomly assigned to one of five experimental conditions. The five conditions varied (a) the *body size* of an attractive UT student (thin-ideal or average-

sized) and (b) *information* about the achievability of the woman’s body size (achievable, not achievable, or no information). *See* Materials.

The five conditions contained the following specifications:

Thin-ideal: Achievable	Picture of woman who embodied the thin-ideal. Information provided that she was the achievable ideal, along with her height and weight.
Thin-ideal: No Information	Picture of woman who embodied the thin-ideal. No information provided other than her height and weight.
Thin-ideal: Not Achievable	Picture of woman who embodied the thin-ideal. Information provided that she was <i>not</i> the achievable ideal, along with her height and weight.
Average-sized: Achievable	Picture of woman who approximated the body size of an average woman. Information provided that she was the achievable ideal, along with her height and weight.
Average-sized: No Information	Picture of woman who approximated the body size of an average woman. No information provided other than her height and weight.

*Materials.* All participants were presented with a photograph of a woman who was said to be a UT student. In the “thin-ideal” conditions (i.e., thin-ideal: achievable, thin-ideal: no information, thin-ideal: not achievable), the woman in the photograph was 5’8” tall and weighed 122 lbs, giving her a BMI of 18.5. Forty independent judges (17 female and 23 male college students) rated her attractiveness as 7.7 on a scale of 0 to 10.

Her score placed her first in attractiveness when the independent judges compared her with 120 female peers. After presenting the picture, the experimenter stated that the woman in the picture “is 5’8” and weighs 122 lbs.”

In the “average-sized” conditions (i.e., average-sized: achievable, average-sized: no information), I worked with a graphic designer and morphed the picture used in the other three conditions to make the thin-ideal student appear heavier, approximating the body dimensions of the average American woman at 5’4” and 140 lbs (Smolak et al., 1996) with a BMI of 24. In order to make sure that the UT student realistically looked like she approximated the average female body dimensions, college peers independently judged the morphed picture. Using a 5-point Likert scale, with 1 equaling “Not at all believable,” 2 “Somewhat believable,” 3 “Believable,” 4 “Very believable,” and 5 “Extremely believable,” the independent judges rated how much they believed that the woman in the picture was 5’4” and weighed 140 lbs. The 68 female college peers judged the morphed picture with an overall average of 2.76, placing the picture close to an overall “Believable” rating. After presenting the morphed picture, the experimenter stated that the woman in the picture “is 5’4” and weighs 140 lbs.”

*Information about Achievability.* After showing the picture of the UT college student and stating her height and weight, the experimenter provided additional information about the woman in the photograph in three of the five conditions. In the achievable conditions (i.e., thin-ideal: achievable and average-sized: achievable), the experimenter stated, “This UT student’s attractiveness has been rated by approximately 700 UT students on a scale of 0 to 10, with 0 being very unattractive and 10 being extremely attractive. She received a mean score of 7.5, which means that she is about



half way between average and extremely attractive. We've chosen her because most people regard her as the attractiveness achievable ideal. She is not the Cindy Crawford *unachievable* ideal, but rather is what people think is achievable. That is, she represents what women *wish* they could look like and what they actually *could* look like. She is a reasonable, achievable ideal attractive UT student." For these two conditions, the experimenter placed a copy of the above statement, along with the height and weight of the woman in the picture, alongside the photograph, on a desk in front of the participant.

In the unachievable condition (i.e., thin-ideal: not achievable), the experimenter stated, "This UT student's attractiveness has been rated by approximately 700 UT students on a scale of 0 to 10, with 0 being very unattractive and 10 being extremely attractive. She received a mean score of 7.5, which means that she is about half way between average and extremely attractive. We've chosen her because most people regard her as the attractiveness *unachievable* ideal. She is not only the Cindy Crawford unachievable ideal, but rather is what people think is unachievable. That is, she represents what women *wish* they could look like but not what they actually *could* look like. She is not a reasonable, achievable ideal attractive UT student." For this condition, the experimenter also placed a copy of the above statement, along with the height and weight of the woman in the picture, alongside the photograph, on a desk in front of the participant.

In the no-information conditions (i.e., thin-ideal: no information and average-sized: no information), the experimenter did not provide any additional information about the woman in the photograph. The experimenter did, however, provide a written

copy of the height and weight of the woman in the picture, alongside the photograph, on a desk in front of the participant.

Stice and Shaw (1994) demonstrated that females require only 3 minutes of looking at pictures of thin-ideal women in order to experience body dissatisfaction and negative affect. In order to keep the participant focused on the picture, the experimenter asked the participant to look carefully at the woman in the picture and consider how she looked. Then, the experimenter asked the participant to write a brief statement about the fashion displayed by the woman in the picture in comparison to the average UT student.

#### **DEBRIEFING**

Because this study involved the use of deception, the last item of the posttest questionnaire asked participants if they thought that the hypothesis of the study was something other than what they had been told at the beginning of the experiment. During the debriefing phase of the study, discussions with individuals who offered an alternative to the stated hypothesis revealed that 26 participants (7 from condition one, 4 from condition two, 6 from condition three, 4 from condition four, and 5 from condition five) correctly guessed the hypothesis. Hence, I excluded the data from these 26 participants, resulting in a final sample size of 356 participants.

#### **MEASURES**

The dependent variables were body dissatisfaction and negative affect, measured in both the pretest and posttest. In the posttest, I collected data for BMI as a potential moderator. As in Krones et al. (2005) and Stice et al. (2003), I also collected data on (1)

thin-ideal internalization, (2) self-esteem, (3) perceived social support, and (4) perceptions of sociocultural pressure to be thin in the posttest and examined these variables as potential moderators.

### **Pretest Measures**

**Body image concerns.** I measured each participant's level of body dissatisfaction with the Satisfaction and Dissatisfaction with Body Parts Scale (*see* Study 1, Measures).

**Negative affect.** I assessed each participant's affective state with the 26 negative items of the PANAS-X and the 13-item short form of the BDI (*see* Study 1, Measures).

### **Posttest Measures**

**Body image concerns.** I measured each participant's level of body dissatisfaction with the Satisfaction and Dissatisfaction with Body Parts Scale (*see* Study 1, Measures).

**Negative affect.** I assessed each participant's affective state with the 26 negative items of the PANAS-X and the 13-item short form of the BDI (*see* Study 1, Measures).

**Thin-ideal internalization.** I assessed the degree to which each participant internalized the thin-ideal through the IBSS-R (*see* Study 1, Measures).

**Self-esteem.** I obtained a global level of each participant's self-esteem through the RSE scale (*see* Study 1, Measures).

**Social support.** I assessed the strength of each participant's relationships with their family and friends and the amount of support participants receive with the Network of Relationships Inventory (*see* Study 1, Measures).

**Perceived sociocultural pressure to be thin.** I measured the amount of pressure that participants receive from peers, family members, dating partners, and the media through the Perceived Sociocultural Pressure Scale (*see* Study 1, Measures).

**Body mass index.** I measured each participant's BMI by collecting the self-reported height and weight of each participant (*see* Study 1, Measures).

## Chapter 6

### Results: Study 2

#### OVERVIEW

Data analysis consisted of a three-step process. In the first step, I examined whether participants in the five conditions showed equivalent levels of body image concerns and negative affect before the experimental manipulation. I also examined the relations among body image, negative affect, and demographic variables prior to the experimental manipulation. In the second step, I examined whether the five experimental conditions differentially affected women's body image concerns and negative affect. Finally, in the third step, I examined whether individual differences among women in thin-ideal internalization, self-esteem, social support, sociocultural pressure to be thin, and BMI moderated the effect of condition on women's body image concern and mood.

#### PRETEST MEASURES

*Body image concerns.* Overall, women showed a mean of 2.87 and a standard deviation of 0.83. These statistics are consistent with studies that used the same body image measure (Krones et al., 2005; Stice et al., 2003). A one-way analysis of variance showed no differences in the level of body image concerns across conditions,  $F(4, 350) = 0.82, p = .51$ .

*Negative affect – PANAS.* Overall, women showed a mean of 1.36 and a standard deviation of 0.41. These statistics are consistent with other studies that used the PANAS

(Krones et al., 2005; Stice et al., 2003). A one-way analysis of variance showed no differences in the level of negative affect across conditions,  $F(4, 346) = 0.38, p = .92$ .

*Negative affect – BDI.* Overall, women showed a mean of 1.29 and a standard deviation of 0.27. These statistics are consistent with other studies that used the BDI short form (Beck et al., 1988; Reynolds & Gould, 1981). A one-way analysis of variance showed no differences in the level of negative affect across conditions,  $F(4, 351) = 0.31, p = .87$ .

#### **RELATIONS AMONG BODY IMAGE, NEGATIVE AFFECT, AND DEMOGRAPHIC VARIABLES**

I ran a correlational analysis to examine the relations among participant responses to body image concerns, negative affect, and demographic variables measured in the pretest. Pearson correlations appear in Table 4. The results show correlations among the body image scores and negative affects scales. Consistent with other studies (Krones et al., 2005; Stice et al., 2003), women who expressed higher dissatisfaction with their bodies showed higher levels of negative affect on both the PANAS and BDI.

#### **MANIPULATION CHECK**

At the end of the posttest (*see* Methods, Study 2), the questionnaire included two questions about whether participants believed the experimental manipulation. The first question asked participants whether they believed that the height and weight of the photographed woman were accurate. A one-way ANOVA showed no significant differences across conditions,  $F(4, 351) = 1.11, p = .35$ .

**Table 4: Correlations Among Body Image, Negative Affect, and Demographic Variables at Pretest**

	Age	Year in College	Body Dissatisfaction	Negative Affect PANAS	Negative Affect BDI
Age	1.00	0.69*	-0.04	-0.05	-0.57
Year in College		1.00	-0.07	0.01	-0.02
Body Dissatisfaction			1.00	0.34*	0.47*
Negative Affect PANAS				1.00	0.71*
Negative Affect BDI					1.00

*Note:* \* Statistically significant correlations at the 0.01 level (2-tailed)

The second question asked whether participants believed that the woman presented in the photograph was the “reasonable, achievable, ideal.” A one-way ANOVA showed that participant responses varied by condition,  $F(4, 351) = 4.75, p < .001$ . As expected, participants who were told that the thin woman is not an achievable ideal showed significantly less agreement with the statement than the participants in all other conditions, who did not differ from each other. Means and standard deviations appear in Table 5.

**Table 5: Means and Standard Deviations for Participant Beliefs that the Photographed Woman Represented the Achievable Ideal by Condition**

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<u>Condition</u>	<u>N</u>	<u>M</u>	<u>SD</u>
Thin-ideal: Achievable	71	3.90	0.81
Thin-ideal: No Information	74	3.72	0.79
Thin-ideal: Not Achievable	68	3.37*	0.93
Average-sized: Achievable	72	3.81	0.82
Average-sized: No Information	71	3.89	0.82

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*Note:* \* Statistically significantly different mean,  $p < .01$

#### **POSTTEST MEASURES**

The primary question of interest in Study 2 was whether exposure to the different conditions affected women's body image and negative affect. Preliminary analyses found no significant differences across conditions in terms of age, year in college, ethnicity, parental education, body dissatisfaction, and negative affect of participants at the time of pretest. Nonetheless, I used repeated-measures ANOVA models to test for experimental effects because they control for even non-significant differences among the groups on the outcome variable. Thus, I ran a 5 (condition) X 2 (time: pretest vs. posttest) repeated measures ANOVA for body dissatisfaction and negative affect.

*Body image concerns.* The repeated-measures ANOVA for body dissatisfaction revealed a significant condition by time interaction,  $F(4, 348) = 3.73, p < .01$ . Means and standard deviations appear in Table 6. Follow-up paired t-tests indicated that



participants in the thin-ideal achievable condition showed significant increases in body dissatisfaction from pretest to posttest,  $t(68) = 4.16, p < .01$ . Participants in the thin-ideal no information condition also showed significant increases in body dissatisfaction from pretest to posttest,  $t(72) = 3.32, p < .01$ . Participants in the other three conditions (i.e., thin-ideal not achievable, average-sized achievable, and average-sized no information) showed no significant changes in body dissatisfaction.

**Table 6: Means and Standard Deviations of Body Dissatisfaction at Pretest and Posttest by Condition**

<u>Condition</u>	<u>N</u>	<u>Pretest</u>		<u>Posttest</u>	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Thin-ideal: Achievable	69	2.82*	0.78	2.95*	0.84
Thin-ideal: No Information	73	3.01*	0.71	3.07*	0.74
Thin-ideal: Not Achievable	68	2.88	0.88	2.90	0.96
Average-sized: Achievable	72	2.77	0.88	2.78	0.92
Average-sized: No Information	71	2.86	0.89	2.86	0.94

*Note:* \* Statistically significantly different means from pretest to posttest,  $p < .01$

In order to assess whether the change in body dissatisfaction was greater when participants viewed the thin-ideal woman who was said to be the achievable ideal than when given no information other than her height and weight, I conducted a two-way mixed model ANOVA comparing body dissatisfaction at Time 1 and Time 2 in the two conditions. This analysis revealed a marginally significant interaction,  $F(1, 140) = 3.03$ ,

$p = .071$ , with women in the thin-ideal achievable condition showing greater increases in body dissatisfaction than women in the thin-ideal no information condition (*see* means and standard deviations in Table 6).

*Negative affect.* Contrary to expectations, the repeated-measures ANOVA for the PANAS did not reveal a significant condition by time interaction,  $F(4, 342) = 1.95, p = .10$ . Likewise, in contrast to expectations, the repeated-measures ANOVA for the BDI did not reveal a significant condition by time interaction,  $F(4, 349) = 1.51, p = .20$ . Table 7 contains the means and standard deviations of participant negative affect scores in each condition.

Researchers designed the PANAS to tap broad negative affect and the BDI to measure depressive symptoms. Although negative affect scores did not differ as a result of condition, it seemed possible that participants may have felt an increase in negative affect connected specifically to perceptions of the self. Hence, I summed participant responses to the two PANAS items that asked about self views (i.e., “disgusted with self” and “dissatisfied with self”) and ran a 5 (condition) X 2 (time) repeated-measures ANOVA. The results showed a marginally significant interaction of condition by time,  $F(4, 350) = 2.18, p = .071$ . Follow-up paired t-tests indicated that participants in the average-sized achievable condition showed a significant decrease in negative views of self from pretest to posttest,  $t(71) = 3.23, p < .01$ . Participants in the average-sized no information condition showed a marginally significant decrease in negative views of the self from pretest to posttest,  $t(70) = 1.84, p = .07$ . Participants in the other three conditions (i.e., thin-ideal achievable, thin-ideal no information, and thin-ideal not

**Table 7: Means and Standard Deviations of Negative Affect at Pretest and Posttest by Condition**

	<u>N</u>	<u>Pretest</u>		<u>Posttest</u>	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
<b>Negative Affect – PANAS</b>					
Thin-ideal: Achievable	70	1.37	0.39	1.29	0.43
Thin-ideal: No Information	70	1.33	0.32	1.27	0.29
Thin-ideal: Not Achievable	66	1.33	0.38	1.29	0.42
Average-sized: Achievable	70	1.40	0.49	1.27	0.37
Average-sized: No Information	71	1.36	0.45	1.26	0.38
<b>Negative Affect – BDI</b>	<u>N</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Thin-ideal: Achievable	71	1.28	0.27	1.27	0.30
Thin-ideal: No Information	73	1.30	0.25	1.32	0.28
Thin-ideal: Not Achievable	67	1.26	0.22	1.26	0.25
Average-sized: Achievable	72	1.30	0.26	1.28	0.26
Average-sized: No Information	71	1.31	0.34	1.32	0.37

*Note:* No means from pretest to posttest were statistically significantly different.

achievable) showed no significant changes in self views from pretest to posttest. Table 8 contains the means and standard deviations of participant self-views in each condition.

#### **INDIVIDUAL DIFFERENCES**

*Overview.* Participants completed individual differences measures for thin-ideal

**Table 8: Means and Standard Deviations of Participant Self-Views at Pretest and Posttest by Condition**

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<u>Condition</u>	<u>N</u>	<u>Pretest</u>		<u>Posttest</u>	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Thin-ideal: Achievable	71	1.49	0.68	1.49	0.79
Thin-ideal: No Information	74	1.47	0.58	1.49	0.70
Thin-ideal: Not Achievable	68	1.49	0.83	1.45	0.65
Average-sized: Achievable	72	1.53*	0.78	1.33*	0.61
Average-sized: No Information	71	1.47**	0.81	1.39**	0.71

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*Note:* \* Statistically significantly different means from pretest to posttest,  $p < .01$   
\*\* Marginally statistically significantly different means from pretest to posttest,  $p < .07$

internalization, self-esteem, perceptions of social support, and perceptions of sociocultural pressure to be thin. Participants also provided their height and weight, and I calculated the BMI for each woman ( $N=356$ ,  $M=22.37$ ,  $SD=3.42$ , Minimum=16.72, Maximum=39.93). I first examined the relations among these five variables, and then I examined whether these individual differences moderated participant responses to the experimental manipulation using regression analyses.

*Relations Among Individual Differences Variables.* I ran a correlational analysis to examine the relations among the individual differences variables. Pearson coefficients appear in Table 9. Self-esteem was significantly associated with thin-ideal internalization, perceptions of social support, perceptions of sociocultural pressure to be

thin, and BMI. Women with lower self-esteem tended to have a higher BMI and to internalize the thin-ideal more than women with higher self-esteem. Women with lower self-esteem also perceived more pressure to be thin and less support from family and peers than women with higher self-esteem. In addition, the results indicated that sociocultural pressure to be thin was related to internalization of thin ideals. Women who internalized the thin-ideal reported greater pressure to be thin from their family and friends. The results also indicated a significant relation between perceived socio-cultural pressure and social support. Women who reported less social support perceived a greater pressure from family and friends to be thin. Finally, women with a higher BMI reported feeling more pressure to be thin from family, friends, and peers.

#### **INDIVIDUAL DIFFERENCES AS MODERATORS.**

*Overview.* I separately examined each of the five individual differences variables (thin-ideal internalization, self-esteem, perceptions of social support, perceptions of sociocultural pressure to be thin, and BMI) as potential moderators in a series of regression analyses. Because all participants responded to individual differences questions in the posttest only, the moderator variable data came from posttest data. Body dissatisfaction and negative affect (PANAS and BDI) change scores served as the outcome variables. Specifically, I calculated the difference between posttest scores and pretest scores for body dissatisfaction and negative affect, and used each of the difference scores as dependent variables.

I transformed the five experimental conditions into dummy-coded variables in order to compare the responses of participants exposed to messages that stated or implied

**Table 9: Correlations Among Individual Differences Variables: Thin-Ideal Internalization, Self-Esteem, Social Support, Sociocultural Pressure to Be Thin, and BMI**

	Thin-Ideal Internalization	Self-Esteem	Social Support	Pressure to Be Thin	BMI
Thin-Ideal Internalization	1.00	-0.18*	0.01	0.22*	0.02
Self-Esteem		1.00	0.38*	-0.41*	-0.16*
Social Support			1.00	-0.25*	-0.07
Pressure to Be Thin				1.00	0.32*
BMI					1.00

*Note:* \* Statistically significant correlations at the 0.01 level (2-tailed)

that the thin-ideal body image was achievable (i.e., thin-ideal achievable and thin-ideal no information) to the responses of participants exposed to messages that stated or implied the opposite (i.e., thin-ideal not achievable, average-sized achievable, average-sized no information). I performed two separate sets of hierarchical regression analyses using the thin-ideal achievable condition and the thin-ideal no information condition as a reference group, respectively, in order to predict the outcome variable (i.e., body dissatisfaction or negative affect). First, in Step 1, I entered the four dummy-coded variables (i.e., the reference group vs. each of the remaining groups) and a potential moderator (i.e., thin-ideal internalization, self-esteem, perceptions of social support, perceptions of sociocultural pressure to be thin, or BMI). In Step 2, I entered the two-

way interaction term, generated by the cross product of the dummy-coded variable and the potential moderator variable. As recommended by Aiken and West (1991), I created all of the interaction terms from centered variables.

*Body image concerns.* In order to examine whether thin-ideal internalization moderated the impact of the various experimental manipulations on body dissatisfaction, I conducted the hierarchical dummy variable regression as outlined above. In Step 1 of the model, I entered the dummy-coded variable for each condition along with thin-ideal internalization. In Step 2, I entered these main effects along with the interaction of the dummy-coded variables and thin-ideal internalization. The results failed to reveal moderation of any of the experimental manipulations by thin-ideal internalization (all  $p$ 's > .05). I then repeated this analysis for each of the other potential moderators—self-esteem, perceived social support, perceived sociocultural pressure to be thin, and BMI—and none of these analyses produced statistically significant moderation (all  $p$ 's > .05). Hence, the results did not show any moderation of any of the experimental manipulations on body dissatisfaction.

*Negative affect – PANAS.* I repeated the same set of hierarchical dummy variable regressions for the PANAS, and an interaction emerged between the thin-ideal achievable condition by average-sized achievable condition comparison and self-esteem,  $beta = .21$ ,  $p < .001$ . See Table 10. In order to decompose this interaction, I computed correlation coefficients between self-esteem and changes in the PANAS score separately in each of these two conditions. This analysis revealed that self-esteem was not correlated with the PANAS in the thin-ideal achievable condition ( $r = -.16$ ,  $p > .05$ ) but was positively correlated with changes in the PANAS in the average-sized achievable condition ( $r = .31$ ,

$p < .01$ ). These results indicated that although self-esteem did not predict changes in mood in the thin-ideal achievable condition, self-esteem predicted changes in mood in the average-sized achievable condition, such that women with lower self-esteem reported less negative mood changes.

**Table 10:** **Regression Model**  
**Dependent Variable: Change in PANAS Scores**  
**Moderator: Self-Esteem**

<u>Step 1</u>	<u>Beta</u>	<u>t</u>	<u>p</u>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.02	0.30	.77
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.08	1.26	.21
Thin-ideal: Achievable vs. Average-sized: Achievable	-0.10	-1.45	.15
Thin-ideal: Achievable vs. Average-sized: No Information	-0.01	-0.18	.86
Self-Esteem	0.09	1.65	.10
 <u>Step 2</u>	 <u>Beta</u>	 <u>t</u>	 <u>p</u>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.01	0.21	.83
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.08	1.21	.23
Thin-ideal: Achievable vs. Average-sized: Achievable	-0.11	-1.62	.11
Thin-ideal: Achievable vs. Average-sized: No Information	-0.02	-0.32	.75
Self-Esteem	0.01	-0.09	.93
Thin-ideal Achievable vs. Average-sized Achievable by Self-Esteem	0.21	3.58	.000



An interaction also emerged between the thin-ideal achievable condition by average-sized achievable condition comparison and perceived social support,  $beta = .18$ ,  $p < .01$ . See Table 11. As such, I computed correlation coefficients between perceived social support and changes in the PANAS score separately in each of these two conditions. This analysis revealed that perceived social support was not correlated with the PANAS in the thin-ideal achievable condition ( $r = -.03$ ,  $p > .05$ ) but was positively correlated with changes in the PANAS in the average-sized achievable condition ( $r = .30$ ,  $p < .02$ ). These results indicate that although perceived social support did not predict changes in mood in the thin-ideal achievable condition, perceived social support predicted changes in mood in the average-sized achievable condition, such that women with lower perceived social support reported less negative mood changes.

An interaction also emerged between the thin-ideal achievable condition by average-sized achievable condition comparison and BMI,  $beta = -.14$ ,  $p < .05$ . See Table 12. I then computed correlation coefficients between BMI and changes in the PANAS score separately in each of these two conditions. This analysis, however, failed to reveal significant correlations in either condition, suggesting that the interaction was probably a product of chance differences in correlations.

I also conducted the hierarchical dummy variable regression analysis for the two other potential moderators—thin-ideal internalization and perceived sociocultural pressure to be thin—but these analyses did not produce any statistically significant results (all  $p$ 's  $> .05$ ). Hence, the results did not show any thin-ideal internalization moderation or perceived sociocultural pressure to be thin moderation of any of the experimental manipulations on the PANAS.

**Table 11:** **Regression Model**  
**Dependent Variable: Change in PANAS Scores**  
**Moderator: Social Support**

<u>Step 1</u>	<i>Beta</i>	<i>t</i>	<i>p</i>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.04	0.63	.53
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.08	1.15	.25
Thin-ideal: Achievable vs. Average-sized: Achievable	-0.10	-1.48	.14
Thin-ideal: Achievable vs. Average-sized: No Information	-0.02	-0.25	.80
Social Support	0.13	2.33	.02
 <u>Step 2</u>	 <i>Beta</i>	 <i>t</i>	 <i>p</i>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.04	0.65	.52
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.08	1.22	.22
Thin-ideal: Achievable vs. Average-sized: Achievable	-0.10	-1.56	.12
Thin-ideal: Achievable vs. Average-sized: No Information	-0.02	-0.23	.82
Social Support	0.06	1.00	.32
Thin-ideal Achievable vs. Average-sized Achievable by Social Support	0.18	3.06	.002

*Negative affect – BDI.* I repeated the hierarchical dummy variable regression for the BDI, and an interaction emerged between the thin-ideal achievable condition by average-sized achievable condition comparison and BMI, beta = .11,  $p < .05$ . See Table 13. In order to decompose this interaction, I computed correlation coefficients between BMI and changes in the BDI score separately in each of these two conditions. This analysis revealed that BMI was positively correlated with the BDI in the thin-ideal

**Table 12:** **Regression Model**  
**Dependent Variable: Change in PANAS Scores**  
**Moderator: BMI**

<u>Step 1</u>	<i>Beta</i>	<i>t</i>	<i>p</i>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.06	0.83	.41
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.09	1.29	.20
Thin-ideal: Achievable vs. Average-sized: Achievable	-0.08	-1.12	.26
Thin-ideal: Achievable vs. Average-sized: No Information	0.01	0.05	.96
BMI	0.12	2.17	.03
 <u>Step 2</u>	 <i>Beta</i>	 <i>t</i>	 <i>p</i>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.06	0.95	.34
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.09	1.34	.18
Thin-ideal: Achievable vs. Average-sized: Achievable	-0.10	-1.43	.16
Thin-ideal: Achievable vs. Average-sized: No Information	0.01	0.19	.85
BMI	0.17	2.90	.004
Thin-ideal Achievable vs. Average-sized Achievable by BMI	-0.14	-2.38	.018

achievable condition ( $r = .36, p < .01$ ) but was not correlated with changes in the BDI in the average-sized achievable condition ( $r = -.05, p > .05$ ). These results indicate that although BMI did not predict changes in mood in the average-sized achievable condition, BMI predicted changes in mood in the thin-ideal achievable condition such that women with a higher body mass index reported more negative mood changes.

**Table 13:** **Regression Model**  
**Dependent Variable: Change in BDI Scores**  
**Moderator: BMI**

<u>Step 1</u>	<i>Beta</i>	<i>t</i>	<i>p</i>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.14	2.08	.04
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.06	0.95	.34
Thin-ideal: Achievable vs. Average-sized: Achievable	0.04	0.55	.58
Thin-ideal: Achievable vs. Average-sized: No Information	0.16	2.40	.02
BMI	0.22	4.22	.000
<u>Step 2</u>	<i>Beta</i>	<i>t</i>	<i>p</i>
Thin-ideal: Achievable vs. Thin-ideal: No Information	0.14	2.16	.03
Thin-ideal: Achievable vs. Thin-ideal: Not Achievable	0.07	1.00	.32
Thin-ideal: Achievable vs. Average-sized: Achievable	0.02	0.34	.73
Thin-ideal: Achievable vs. Average-sized: No Information	0.17	2.52	.01
BMI	0.26	4.68	.000
Thin-ideal Achievable vs. Average-sized Achievable by BMI	-0.11	-2.01	.045

I also conducted the hierarchical dummy variable regression analysis for the four other potential moderators—thin-ideal internalization, self-esteem, perceived social support, and perceived sociocultural pressure to be thin—but none of these analyses produced statistically significant results (all  $p$ 's > .05). Hence, the results did not show any thin-ideal internalization, self-esteem, perceived social support, or perceived

sociocultural pressure to be thin moderation of any of the experimental manipulations on the BDI.

It must be noted, however, that because I conducted a large number of regression analyses, some of the significant results could have been due to chance. For this reason, all of the moderation analyses reported for this experiment require replication before they can be accepted as meaningful.

## Chapter 7

### Discussion: Study 2

In Study 2, I examined the effects of believing that the thin-ideal body image was the normative body size among women by experimentally manipulating the body size of a thin-ideal woman's portrait and testing whether the information about her would result in body dissatisfaction and negative affect. As hypothesized, participants who compared themselves with the picture of a thin-ideal peer who was said to be the "reasonable, achievable, ideal attractive" woman, as well as those who compared themselves with the picture of the thin-ideal peer without any additional information about her, demonstrated significant increases in body dissatisfaction relative to those in the three control conditions. In contrast, participants who saw a picture of a thin-ideal peer with information that she was *not* the achievable ideal, and those who saw the morphed picture that portrayed an average-sized woman (with or without information that she was the achievable ideal) did not show significant increases in body dissatisfaction. Keeping in mind that participants showed no difference across conditions in the extent to which they believed that the height and weight of the woman in the picture were accurate, it is noteworthy that this significant difference in body dissatisfaction emerged given that independent judges rated the morphed picture—which portrayed the average-sized woman in two of the conditions—as just shy of "believable." Moreover, given that the experimental manipulations were relatively brief, this experiment is likely to be a

conservative test of the effects of believing in the thin-ideal body size as the norm among women.

The results also revealed a marginally significant difference in body dissatisfaction between participants who saw the picture of the thin-ideal peer with the information that she was the achievable ideal and those who saw the same picture without any additional information. This trend indicates that the information about the achievability of the thin-ideal affected women's level of body dissatisfaction above and beyond the effects of mere exposure to a thin-ideal model. As hypothesized, this result suggests that participants exposed to a picture of a peer who physically embodied the thin-ideal, along with information that she represented an ideal that most people believe was achievable, may have perceived themselves as failing to conform to the norm of body dimensions of women, and hence, may have felt more dissatisfied with their own body shape and weight than participants exposed only to the picture of the thin-ideal peer.

These results complement those from previous studies that explored the etiology of body dissatisfaction. Specifically, they support the assertion that peer pressure reinforces the thin-ideal, which in turn leads to body dissatisfaction (Striegel-Moore et al., 1986; Wertheim et al., 1997), and they complement the findings that sociocultural pressures that even implicitly suggest that women are not thin enough promote body dissatisfaction (Krones et al., 2005; Stice et al., 2003). Study 2 also concurs with evidence that pressure to be thin by peers prospectively predicts increases in body dissatisfaction (Cattarin & Thompson, 1994). Moreover, the results of this study are consistent with other experimental studies indicating that social pressure to be thin

generates adverse effects, as in the Irving (1990) study that manipulated exposure to thin-ideal images in the media and the Krones et al. (2005) experiment in which participants interacted with a confederate, one of whom looked like a thin-ideal model while the other was an attractive, average-sized woman. The Irving study found decreases in weight satisfaction, and the Krones et al. experiment found decreases in body satisfaction. The results in Study 2 also add to the number of research experiments that have demonstrated a link between media-portrayed thin-ideal images and body dissatisfaction (Cattarin et al., 2000; Heinberg & Thompson, 1995; Posavac et al., 1998; Stice & Shaw, 1994; Stice et al., 2001; Wertheim et al., 1997; Wilcox & Laird, 2000). Overall, these findings contribute to the collection of research studies that have demonstrated a connection between sociocultural processes and body image disturbances. Because body dissatisfaction is one of the main risk factors for eating disturbances (Stice, 2002), it is troubling that believing that a thin-ideal woman is the achievable ideal may heighten peer pressure to be thin, which then in turn may increase body dissatisfaction.

Contrary to expectations, I found little support for the hypothesis that women would experience significant increases in negative affect if they believed that the thin-ideal body image was the norm among women. The results indicated that exposure to a picture of a thin-ideal woman, regardless of information provided about her, did not cause women to experience greater negative affect. This lack of effect is surprising given the research that has revealed a link between sociocultural pressure to be thin and negative affect, such as the Cattarin et al. (2000) study that manipulated exposure to televised commercial images of thinness, and the Stice and Shaw (1994) experiment that manipulated exposure to magazine pictures of thin-ideal images. However, two recent



experimental studies that manipulated sociocultural pressure to be thin—one in which participants interacted directly with a thin-ideal peer (Krones et al., 2005) and one in which students engaged in discussions of feeling fat (Stice et al., 2003)—also found an increase in body dissatisfaction but not negative affect. Several factors may explain this discrepancy. First, even though independent judges rated the thin-ideal woman in the picture as highly attractive, she may not have been considered by participants to be as provocative as the media-portrayed ultra slender model. Second, the manipulations in this study may have been too brief to provoke affective changes resulting from sociocultural pressure to be thin in the context of thin-ideal norm endorsement. Perhaps women need time to fully absorb social comparison processes. Finally, the lack of findings for negative affective could have been the result of the measures employed to detect affective disturbances, which may not have been sensitive enough to capture an experimental effect. This is unlikely, however, given the strong reliability and validity associated with the PANAS-X and the BDI. Perhaps future studies that explore the connection between thin-ideal norm endorsement and negative affect may be able to provide a more definitive understanding for this lack of findings.

It is noteworthy, however, that when I explored several clusters of items within the PANAS-X and the BDI, I found a marginally significant difference in self views (i.e., “disgusted with self” and “dissatisfied with self”) between conditions. Follow-up tests showed a significant decrease in negative views among participants who saw the picture of the average-sized woman along with information that she was the achievable ideal, and a marginally significant decrease in negative views among participants who saw the picture of the average-sized woman without additional information. These findings

suggest that the information provided about the average-sized woman may have affected the extent to which participants felt better about themselves. As hypothesized, these results tentatively suggest that participants exposed to an average-sized peer, along with information that she represented an ideal that most people believe was achievable, may have perceived themselves as conforming to body dimension norms, and hence, may have felt more satisfied with their own body shape and weight.

I also examined whether a number of individual differences variables—thin-ideal internalization, self-esteem, perceived social support, perceptions of sociocultural pressure to be thin, and BMI—moderated the adverse effects of believing that the thin-ideal body image was the norm among women. I hypothesized that participants with greater levels of thin-ideal internalization, lower self-esteem, lower perceptions of social support, greater perceptions of sociocultural pressure to be thin, and a higher BMI might show more pronounced effects, and I based these predictions on research that found a connection between these variables and media portrayals of the thin-ideal (Heinberg & Thompson, 1995; Stice et al., 2001; Wilcox & Laird, 2000). The results indicated significant correlations among the moderators such that participants with lower self-esteem had a higher BMI, greater thin-ideal internalization, greater perception of sociocultural pressure to be thin, and less support from family and friends than participants with higher self-esteem. Moreover, participants who reported having a higher BMI, greater thin-ideal internalization, and less social support perceived greater pressure to be thin from family, friends, and peers. These correlations concur with similar findings for self-esteem and sociocultural pressure to be thin (Krones et al., 2005; Stice & Agras, 1998; Wertheim et al., 1997).

Surprisingly, none of the individual differences variables moderated the effects of thin-ideal norm endorsement on body dissatisfaction. It may be that these vulnerability factors play a more important role in media-portrayed pressure to be thin than for social comparative pressure to be thin in the context of thin-ideal norm endorsement. Likewise, even though independent judges rated the picture of the thin-ideal peer as the most attractive woman among 120 peers, with an overall mean of 7.7 out of a possible 10, participants may not have found her attractive enough in comparison to media-portrayed models. It is possible that the media-portrayed thin-ideal women take on a larger-than-life quality of exceptional attractiveness that the picture of a thin-ideal peer could not possibly capture. However, the failure to find evidence of moderation of body dissatisfaction has been reported in two other experiments that explored the effects of social comparative processes on body dissatisfaction (Krones et al., 2005; Stice et al., 2003). Perhaps the media-portrayed thin-ideal sociocultural pressure experiments employed stronger manipulations that were more capable of teasing out the moderating effects of body dissatisfaction. Future research will hopefully continue to explore the individual differences that may moderate the adverse effects of thin-ideal norm endorsement on body dissatisfaction.

Nonetheless, as hypothesized, I found individual differences that moderated the effects of thin-ideal norm endorsement on negative affect. With mood as the dependent variable, the results indicated an interaction between self-esteem and condition, such that participants with low (but not high) self-esteem indicated a less negative mood after seeing the “achievable” average-sized woman but not after seeing the “achievable” thin-ideal woman. This suggests that women with lower levels of self-esteem who engaged in

the social comparative process felt better when they compared themselves to an average-sized woman considered to be the achievable ideal body size. Likewise, the findings also revealed an interaction between perceived social support and condition, such that participants with less (but not more) social support reported a less negative mood after seeing the “achievable” average-sized woman but not after seeing the “achievable” thin-ideal woman. This suggests that women with less social support from family and friends felt better when they compared themselves to an average-sized woman considered to be the achievable ideal body size. The results also found an interaction between BMI and condition such that participants with a higher (but not lower) BMI showed an increase in depressive thoughts after seeing the “achievable” thin-ideal woman but not after seeing the “achievable” average-sized woman. This suggests that women with a higher BMI felt more depressed when they compared themselves to the thin-ideal woman considered to be the achievable ideal body size.

These results support the assertion that individuals with low self-esteem tend to feel better when they compare themselves with similar people (Gibbons & McCoy, 1991) or those perceived as worse off (Aspinwall & Taylor, 1993). Perhaps the participants in this study with low self-esteem felt better when they saw the “achievable” average-sized woman because they believed that they had a similar body size as the woman in the picture. Moreover, if participants with low self-esteem believed that the average-sized woman in the picture was considered by most people to be the achievable ideal, then they may have perceived themselves as conforming to the norm of body dimensions of women and thus, felt happier about their own body shape weight. Contrary to expectations, however, I found no evidence that thin-ideal internalization or perceptions of

sociocultural pressure to be thin moderated the effects of thin-ideal norm endorsement on negative affect. This is surprising given the studies that have found a connection between these vulnerability factors and negative affect (Heinberg & Thompson, 1995; Stice & Agras, 1998; Stice et al., 2001). Nevertheless, collectively, the effects of moderation found in Study 2 add to the group of research studies that have found a link among sociocultural processes, body image, and negative affect (Cattarin et al., 2000; Posavac et al., 1998; Stice & Agras, 1998; Stice et al., 2001; Wertheim et al., 1997). Considering that negative affect is one of the risk factors for eating pathology (Stice, 2002), it is worrisome that women with a higher BMI felt more depressed after seeing the “achievable” thin-ideal woman. Nonetheless, the findings that women with low self-esteem or less social support felt better after viewing the “achievable” average-sized woman provide insight into possible prevention intervention opportunities.

Together, these three interactions provide additional insight into the way in which thin-ideal norm endorsement influences negative affect. Interestingly, when predicting negative affect, I found no evidence of moderation for participants in the two conditions that showed pictures only, regardless of whether participants saw a thin-ideal woman or an average-size woman. Rather, self-esteem, social support, and BMI moderated the effects of thin-ideal norm endorsement on negative affect only in the two conditions that told participants that the woman in the picture was the achievable ideal. These findings support the hypothesis that the information provided about the picture of the woman affected the mood of participants. Specifically, the results suggest that women with low self-esteem or less social support who saw the picture of the average-sized woman, along with information that she represented an ideal that most people believe is achievable, may

have perceived themselves as conforming to body dimension norms and, as a consequence, felt better about themselves. Likewise, the findings suggest that women with a higher BMI who saw the picture of the thin-ideal woman along with information that she represented an ideal that most people believe is achievable, may have perceived themselves as failing to conform to the norm of body dimensions of women and so, felt more depressed.

It is worthwhile to explore an unexpected and surprising reaction to the condition in which participants saw a picture of a thin-ideal peer with information that she was *not* the achievable ideal. I hypothesized that this condition would serve as a control, just as I predicted that the two conditions with the picture of the average-sized woman, with or without information that she was the achievable ideal, would function as control conditions. When the posttest asked participants whether they believed the height and weight of the photographed woman (i.e., the experimental manipulations), the results indicated no significant differences across conditions. In contrast, when the posttest asked whether participants believed that the woman in the picture was the “reasonable, achievable, ideal,” the results revealed a significant difference among conditions. Participants who were told that the thin-ideal woman was *not* an achievable ideal reported significantly less agreement with the statement than the participants in all other conditions, who did not differ from each other. Hence, the manipulation check seemed to verify that participants who were told that the thin-ideal woman was *not* an achievable ideal responded to the manipulation as they were expected to respond. However, the completed statistical analysis found only one additional significant effect for participants in this condition. Specifically, the results indicated that participants exposed to the thin-

ideal achievable and the thin-ideal no information manipulations showed an increase in body dissatisfaction relative to participants in the thin-ideal not achievable condition and the other two control conditions (i.e., average-sized achievable and average-sized no information). The results, however, did not find an effect of the thin-ideal not achievable manipulation on negative affect nor did the analysis reveal any moderation effects for participants in this condition. This was surprising, given the marginally significant effects on negative affect and the moderation effects found for the other two control conditions (i.e., average-sized achievable and average-sized no information). Hence, the way in which participants exposed to the thin-ideal woman with information that she was *not* an achievable ideal responded to this manipulation remains somewhat of a mystery.

Participants' comments provide some insight into how those participants exposed to the picture of the "not achievable" thin-ideal woman reacted to that particular manipulation. As discussed in the methods section, the last item that participants completed at the end of the posttest asked them if they thought that the hypothesis of the study was something other than what they had been told at the beginning of the experiment (i.e., that the experiment was exploring the average characteristics of UT students). A number of participants, approximately 12% of the sample, however, misinterpreted the question as asking about the information given about the woman in the picture (including participants in the two conditions that provided no information other than her height and weight). Of the 43 participants who made this mistake and, instead of the hypothesis, commented about the woman in the picture, 5 participated in the thin-ideal achievable condition (total N = 71), 7 participated in the thin-ideal no information condition (total N = 74), 4 participated in the average-sized achievable condition (total N

= 72), and 3 participated in the average-sized no information condition (total N = 71). However, in the condition in which participants saw the photograph of the thin-ideal woman along with the information that she was *not* the achievable ideal, 24 of 68, or 35% of the participants commented about the information provided. The total number of comments in this condition exceeded the total number of comments in all of the other conditions combined. Examples of comments in the “not achievable” thin-ideal condition included the following:

“I wish I could look like her and her figure is obtainable with a healthy diet and exercise.”

“A 7.5 would not be ‘unachievable.’”

“She is an average woman who takes care of herself and shows confidence creating a beauty that any woman can achieve with her own motivation.”

“Although the student is very attractive, I don’t think her attractiveness is ‘unachievable.’”

“I think she looks average just like most of the UT girl students, very reasonable and achievable.”

“I doubt most people find her so attractive it’s ‘unachievable.’ She is reasonably attractive and healthy looking.”

“I think that any girl could look like her, but things get in the way. I disagree with the hypothesis.”

“I think her ‘look’ is achievable for the average UT student.”

The above comments appear to be participant endeavors to refute the claim that the picture of the thin-ideal model is *not* the achievable ideal. What is it about this condition that participants found so provocative, enough so that more than one-third of the participants felt the need to argue against the statement? Perhaps the BMI of the



participants who argued against the statement will provide some insight into their behavior. The 24 participants who argued against the statement had an average BMI of 23.77, with none underweight (BMI <18.5) and only 7 overweight (BMI >24.9). Considering that the average BMI of all 356 participants in Study 2 was 22.37 and that the BMI of the average American woman is 24 (Levine & Smolak, 1996), it is highly unlikely that the 24 participants who argued against the statement that the thin-ideal woman was *not* the achievable ideal did so because their own BMI approximated the thin-ideal BMI. On the contrary, at 23.77, the average BMI of the 24 participants placed them far closer to the BMI of the average-sized woman (BMI=24) than the thin-ideal woman (BMI=18.5). That is, because the average BMI of the 24 who argued against the statement approximated the BMI of the average American woman, it is doubtful that they argued that the thin-ideal woman is actually achievable because they themselves embodied that body size. Therefore, perhaps because the thin-ideal body image is so ubiquitous and has been portrayed by the media consistently during the entire lifetime of the participants, the 24 did not believe or did not *want* to believe that the thin-ideal was not actually the achievable ideal. That is, perhaps the participants who argued against the manipulation did so because they actually believe that the thin-ideal is indeed the norm among body sizes of women. Hopefully, future research will explore thin-ideal norm endorsement in greater depth in order to tease out the effects of telling women that the thin-ideal is *not* actually an achievable ideal.

## Chapter 8

### General Discussion

Together, the results of these studies suggest that pluralistic ignorance may be influencing the way in which women react to the media-portrayed thin-ideal body image. Prentice and Miller (1993) suggested that pluralistic ignorance—the mistaken belief that one’s thoughts, feelings, perceptions, and beliefs are different from one’s peers—perpetuates unsupported or weakly supported social norms and may actually encourage individuals to change their behavior in order to conform to a norm that is not actually a norm (Prentice & Miller, 1993; Miller & Prentice, 1994; Miller & McFarland, 1991). With this theory in mind, I hypothesized in Study 1 that participants—at the group level—would endorse the belief that women who embody the thin image portrayed by the media represent the norm rather than the exception of body size among women, and that this endorsement would have an effect on body image and mood. The results did not support this hypothesis. With an overall mean of 2.40, participants collectively fell between disbelieving and remaining neutral about the thin-ideal body size representing the norm among women. However, the overall minimum of 1.14, which corresponded to strongly disbelieving that the thin-ideal is the norm, and maximum of 3.86, which corresponded to believing that the thin-ideal is the norm, indicated considerable variability in women’s beliefs about the thin-ideal body image. It is possible, then, that the women who reported that they believed that the thin-ideal body image represented the norm may have experienced pluralistic ignorance.

Study 2, however, revealed some findings that support the theory of pluralistic ignorance. In Study 2, I hypothesized that providing participants with information that a particular woman represented an ideal body size that most people believed was achievable would affect the body image and mood of the participants. Theoretically, according to pluralistic ignorance, if women believed that the thin-ideal body size was actually the norm among women, then they would feel worse about themselves and their bodies if they did not meet the criteria of that body size norm. The results suggest support for this theory. Women who saw a picture of a thin-ideal woman (with and without information that most people believed that she was the achievable ideal) experienced a significant increase in body dissatisfaction when compared with participants who saw a picture of a thin-ideal woman with information that she was not the achievable ideal, as well as participants who saw a picture of an average-sized woman (with and without information that most people believed that she was the achievable ideal). Moreover, the results found a marginally significant increase in body dissatisfaction among participants who saw the picture of the thin-ideal woman with information that she was the achievable ideal when compared to participants exposed to the picture only. Perhaps women exposed to the “achievable” thin-ideal woman experienced a marginally significant increase in body dissatisfaction compared to women who saw only the picture of the thin-ideal woman without additional information, because the former experienced pluralistic ignorance by believing that the thin-ideal body size was the achievable ideal and hence, perceived themselves as failing to conform to the norm of body dimensions of women.

Like Study 1, the findings in Study 2 suggest considerable variability in women's reactions to the thin-ideal body image in the context of thin-ideal norm endorsement. By employing an experimental design, Study 2 manipulated the way in which participants encountered body size norms, both in a visual display through a picture and by information provided about the achievable, ideal body size. The results suggest variability in the way in which participants believed in the thin-ideal body image as the normative body size among women. By telling participants that a particular body size was the achievable ideal body image, the results indicate some mobility in the mood and body image of participants. When women saw the picture of the thin-ideal woman with information that most people found her the achievable ideal, they showed an increase in body dissatisfaction. When women saw the picture of the average-sized woman with information that most people found her the achievable ideal, some of the women felt better about themselves (i.e., those with low self-esteem or poor social support). It might be fruitful for future research to extend these findings by exploring the differences in the degree to which women endorse the thin-ideal body size as the norm. Likewise, because women with *clusters* of traits—such as, for example, low self-esteem, little social support, and high BMI—may be especially vulnerable to the effects of media images and other endorsements of the thin-ideal, it may be beneficial for future research to explore the effects of multiple vulnerabilities to thin-ideal norm endorsement. These kinds of studies would provide a more comprehensive understanding of the extent to which women experience pluralistic ignorance about body image norms, as would an investigation into whether (and how) women alter their behavior as a result of believing that the thin-ideal body image is an achievable norm.

## LIMITATIONS

When interpreting the findings of these studies, it is important to consider the limitations involved with each research endeavor. For Study 1, providing participants with a self-report questionnaire that took less than one-half hour to complete may not have allowed adequate time for the effects of thin-ideal norm endorsement to manifest themselves within the body image concerns and mood measures. Moreover, the Beliefs in Body Size Norms scale that I created to measure thin-ideal norm endorsement had a Cronbach's Alpha of only .74 and thus may need improvement in order to capture the effects of thin-ideal norm endorsement on body image concerns and mood. For Study 2, the experimental manipulations of thin-ideal norm endorsement may have been too brief, with participants exposed for too short an amount of time to a photographed woman with or without information about her fulfilling the criteria of an achievable ideal body size. In addition, a couple of the findings emerged from marginally significant results, which, therefore, should be interpreted only tentatively. Moreover, recruiting all of the research participants for Study 2 and almost all of them for Study 1 from an undergraduate pool of females who volunteered in order to fulfill a research requirement, limits the generalizability of the results to other populations. Also, the findings in both studies came exclusively from self-report measures. Finally, the external validity of the results in both studies may be limited by engaging participants in an experimental laboratory setting. It may be beneficial for future research to replicate and expand upon the findings in this research endeavor in a more ecologically valid environment involving thin-ideal norm endorsement.

## **IMPLICATIONS**

The results of this research endeavor have several implications for theoretical models of etiology, clinical treatment, and future research. First, the findings in Study 1 indicate relations among thin-ideal norm endorsement, perceptions of greater sociocultural pressure to be thin, and less social support from family and friends. Hopefully, future research studies will attempt to replicate these findings and expand upon them in order to delve further into the effects of thin-ideal norm endorsement on the social comparative process. Second, the results in Study 2 provide experimental evidence for the hypothesis that thin-ideal norm endorsement promotes body dissatisfaction. These results suggest that thin-ideal norm endorsement has adverse effects on young women, and future research should try to replicate the findings that thin-ideal norm endorsement has on the body image concerns and mood of women who engage in the social comparative process. It may be useful if future experiments could find a stronger manipulation of thin-ideal norm endorsement in order to enhance the capability of detecting effects for other hypothesized outcomes. Perhaps this could be accomplished through a manipulation that followed up on the theory of pluralistic ignorance and teased out the differences in the degree to which women endorse the thin-ideal as the norm and how that influences their social interactions and eating behaviors. It would also be beneficial for future research studies to investigate the factors that increase or diminish the effects of thin-ideal norm endorsement in social comparison processes. Third, Study 2 also found experimental evidence of interactions with participants who saw the picture of the average-sized woman, such that women with lower self-esteem or less support from family and friends felt better after they saw the average-sized woman along with

information that she was the achievable ideal body size. It may be beneficial if future research studies could tease out the subtle ways in which messages about average-sized bodies influence the body image concerns and mood of young women. Future research could explore the influence of the Dove commercials and print ads, which have been successful for almost two years and focus on women of average-sized bodies. Overall, these findings suggest that prevention interventions and clinical treatment may lower the risk for body image and eating disturbances by focusing on thin-ideal norm endorsement in young women. Likewise, interventions and treatments that encourage the message that average-sized bodies are actually the normative attractive body size may also reduce the risk for body image concerns and eating pathology.

## **Appendices**

**APPENDIX A: STUDY 1 QUESTIONNAIRE**

**APPENDIX B: STUDY 1 RESPONSES TO THE BELIEFS IN BODY SIZE NORMS SCALE**

**APPENDIX C: STUDY 2 PRETEST**

**APPENDIX D: STUDY 2 POSTTEST**

**APPENDIX E: STUDY 2 ACTIVITIES QUESTIONNAIRE**

**APPENDIX F: STUDY 2 FASHION STATEMENT FORM**

**APPENDIX G: CONSENT FORM**

**APPENDIX H: POST-DEBRIEFING CONSENT FORM**

**APPENDIX I: DEBRIEFING FORMS**

**APPENDIX J: MORPHED PICTURE BELIEVABILITY FORM**



## Appendix A

# BUTTERFLIES



PLEASE ANSWER ALL OF THE FOLLOWING QUESTIONS:

Age__	Ethnicity:	Father/father figure's education:	Mother/mother figure's education:
Gender:	Asian__	Grade School Graduate__	Grade School Graduate__
Female__	Black__	Some High School__	Some High School__
Male__	Hispanic__	High School Graduate__	High School Graduate__
	Native American__	Some College__	Some College__
Year in	White__	College Graduate__	College Graduate__
College__	Other__	Advanced Degree__	Advanced Degree__

How much do you believe these statements?	strongly disbelieve	neutral	strongly believe		
1. Women who embody the thin image portrayed by the media are actually the <b>norm</b> rather than the <b>exception</b> of body size among women. ....	1	2	3	4	5
2. A woman who is 5'8" and weighs 122 lbs represents the average UT student. ....	1	2	3	4	5
3. A woman who is 5'8" and weighs 122 lbs represents the reasonable, achievable, ideal attractive UT student. ....	1	2	3	4	5
4. A woman who is 5'8" and weighs 122 lbs does <b>not</b> represent the reasonable, achievable, ideal attractive UT student. ....	1	2	3	4	5
5. Women who embody the thin image portrayed by the media are actually the <b>exception</b> rather than the <b>norm</b> of body size among women. ....	1	2	3	4	5
6. A woman who is 5'4" and weighs 140 lbs represents the average UT student. ....	1	2	3	4	5
7. A woman who is 5'4" and weighs 140 lbs represents the reasonable, achievable, ideal attractive UT student. ....	1	2	3	4	5

What is your height? \_\_\_\_\_

What is your weight? \_\_\_\_\_

What is your ideal weight? \_\_\_\_\_

What is the weight that you believe others think you ought to weigh? \_\_\_\_\_

**For each group of statements, read all four sentences and circle the one that best describes the way you currently feel. Be sure to read all the statements in each group before making your choice.**

1.
  1. I do not feel sad.
  2. I feel sad or blue.
  3. I am blue or sad all the time and I can't snap out of it.
  4. I am so sad or unhappy that I can't stand it.
2.
  1. I do not feel that the future is hopeless and that things cannot improve.
  2. I feel discouraged about the future.
  3. I feel I have nothing to look forward to.
  4. I feel that the future is hopeless and that things cannot improve.
3.
  1. I do not feel like a failure.
  2. I feel I have failed more than the average person.
  3. As I look back on my life, all I can see is a lot of failures.
  4. I feel I am a complete failure as a person (parent, husband, wife).
4.
  1. I am not particularly dissatisfied.
  2. I don't enjoy things the way I used to.
  3. I don't get satisfaction out of anything anymore.
  4. I am dissatisfied with everything.
5.
  1. I don't feel particularly guilty.
  2. I feel bad or unworthy a good part of the time.
  3. I feel quite guilty.
  4. I feel as though I am very bad or worthless.
6.
  1. I don't feel disappointed in myself.
  2. I am disappointed in myself.
  3. I am disgusted with myself.
  4. I hate myself.
7.
  1. I don't have any thoughts of harming myself.
  2. I feel I would be better off dead.
  3. I have definite plans about committing suicide.
  4. I would kill myself if I had the chance.
8.
  1. I have not lost interest in other people.
  2. I am less interested in other people than I used to be.
  3. I have lost most of my interest in other people and have little feeling for them.
  4. I have lost all of my interest in other people and don't care about them at all.
9.
  1. I make decisions about as well as ever.
  2. I try to put off making decisions.
  3. I have great difficulty in making decisions.
  4. I can't make any decisions at all any more.
10.
  1. I don't feel that I look any worse than I used to.
  2. I am worried that I am looking old or unattractive.
  3. I feel that there are permanent changes in my appearance and they make me look unattractive.
  4. I feel that I am ugly or repulsive-looking.
11.
  1. I can work about as well as before.
  2. It takes extra effort to get started at doing something.
  3. I have to push myself very hard to do anything.
  4. I can't do any work at all.
12.
  1. I don't get more tired than usual.
  2. I get tired more easily than I used to.
  3. I get tired from doing anything.
  4. I get too tired to do anything.
13.
  1. My appetite is no worse than usual.
  2. My appetite is not as good as it used to be.
  3. My appetite is much worse now.
  4. I have no appetite at all anymore.

Here are a number of words and phrases that describe different feelings and emotions. Read each item and circle the response that indicates how you are currently feeling.

	very slightly or not at all	a little	moderately	quite a bit	extremely
1. Sad . . . . .	1	2	3	4	5
2. Blue. . . . .	1	2	3	4	5
3. Depressed . . . . .	1	2	3	4	5
4. Downhearted. . . . .	1	2	3	4	5
5. Alone. . . . .	1	2	3	4	5
6. Lonely . . . . .	1	2	3	4	5
7. Guilty. . . . .	1	2	3	4	5
8. Ashamed . . . . .	1	2	3	4	5
9. Blameworthy. . . . .	1	2	3	4	5
10. Angry at self. . . . .	1	2	3	4	5
11. Disgusted with self. . . . .	1	2	3	4	5
12. Dissatisfied with self. . . . .	1	2	3	4	5
13. Angry. . . . .	1	2	3	4	5
14. Hostile. . . . .	1	2	3	4	5
15. Irritable . . . . .	1	2	3	4	5
16. Scornful. . . . .	1	2	3	4	5
17. Disgusted. . . . .	1	2	3	4	5
18. Loathing. . . . .	1	2	3	4	5
19. Anxious. . . . .	1	2	3	4	5
20. Worried . . . . .	1	2	3	4	5
21. Afraid . . . . .	1	2	3	4	5
22. Scared . . . . .	1	2	3	4	5
23. Frightened . . . . .	1	2	3	4	5
24. Nervous . . . . .	1	2	3	4	5
25. Jittery. . . . .	1	2	3	4	5
26. Shaky. . . . .	1	2	3	4	5

**How much do you agree with these statements?**

	strongly disagree	disagree	neutral	agree	strongly agree
1. I feel that I have a number of good qualities. . . . .	1	2	3	4	5
2. All in all, I am inclined to feel that I am a failure. . . . .	1	2	3	4	5
3. I am able to do things as well as most other people . . . . .	1	2	3	4	5
4. I do not have much to be proud of. . . . .	1	2	3	4	5
5. I have a positive attitude toward myself. . . . .	1	2	3	4	5
6. I wish I could have more respect for myself . . . . .	1	2	3	4	5
7. I feel useless at times. . . . .	1	2	3	4	5
8. At times I think I am no good at all. . . . .	1	2	3	4	5
9. On the whole, I am satisfied with myself. . . . .	1	2	3	4	5

**Please indicate your satisfaction with the following:**

	extremely satisfied	moderately satisfied	neutral	moderately dissatisfied	extremely dissatisfied
1. Weight. . . . .	1	2	3	4	5
2. Figure or physique. . . . .	1	2	3	4	5
3. Appearance of stomach. . . . .	1	2	3	4	5
4. Body build. . . . .	1	2	3	4	5
5. Waist. . . . .	1	2	3	4	5
6. Thighs. . . . .	1	2	3	4	5
7. Buttocks. . . . .	1	2	3	4	5
8. Hips. . . . .	1	2	3	4	5
9. Legs. . . . .	1	2	3	4	5
10. Shoulders. . . . .	1	2	3	4	5
11. Arms. . . . .	1	2	3	4	5
12. Size of stomach. . . . .	1	2	3	4	5
13. Height. . . . .	1	2	3	4	5
14. Upper thighs. . . . .	1	2	3	4	5
15. Bottom. . . . .	1	2	3	4	5

**Please circle the response that reflects your agreement with these statements over the past week:**

	strongly disagree	disagree	neutral	agree	strongly agree
1. Slim women are more attractive . . . . .	1	2	3	4	5
2. Tall women are more attractive. . . . .	1	2	3	4	5
3. Women with toned bodies are more attractive . . . . .	1	2	3	4	5
4. Women who are in shape are more attractive . . . . .	1	2	3	4	5
5. Slender women are more attractive. . . . .	1	2	3	4	5
6. Women with long legs are more attractive . . . . .	1	2	3	4	5
7. Curvy women are more attractive . . . . .	1	2	3	4	5
8. Shapely women are more attractive. . . . .	1	2	3	4	5

**Please answer these questions as they apply to your relationship with your friends and parents/parent-figures over the last 6 months:**

	strongly disagree	neutral	strongly agree		
1. I could count on my parent(s) to be there when I needed them. . . . .	1	2	3	4	5
2. My parent(s) treated me with respect and admiration . . . . .	1	2	3	4	5
3. My parent(s) gave me good advice about how to handle problems . . . . .	1	2	3	4	5
4. I did enjoyable things with my parent(s) . . . . .	1	2	3	4	5
5. My parent(s) really cared about me . . . . .	1	2	3	4	5
6. I shared my private feelings with my parent(s) . . . . .	1	2	3	4	5
7. I could count on my friends to be there when I needed them. . . . .	1	2	3	4	5
8. My friends treated me with respect and admiration. . . . .	1	2	3	4	5
9. My friends gave me good advice about how to handle problems I had. . . . .	1	2	3	4	5
10. I did enjoyable things with my friends. . . . .	1	2	3	4	5
11. My friends really cared about me. . . . .	1	2	3	4	5
12. I shared my private feelings with my friends. . . . .	1	2	3	4	5

**Please circle the response that best captures your own experience:**

	none		some		a lot
1. I've felt pressure from my friends to lose weight. . . . .	1	2	3	4	5
2. I've noticed a strong message from my friends to have a thin body. . . .	1	2	3	4	5
3. I've felt pressure from my family to lose weight . . . . .	1	2	3	4	5
4. I've noticed a strong message from my family to have a thin body. . . .	1	2	3	4	5
5. I've felt pressure from people I've dated to lose weight. . . . .	1	2	3	4	5
6. I've noticed a strong message from people I've dated to have a thin body. . . . .	1	2	3	4	5
7. Family members tease me about my weight or body shape . . . . .	1	2	3	4	5
8. Other students at school tease me about my weight or body shape. . . . .	1	2	3	4	5

**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.**

*Just a few more questions. . .*

<b>How much do you agree with these statements?</b>	strongly disagree		neutral		strongly agree
1. In general, I felt guarded about answering the questions in this survey. . . . .	1	2	3	4	5
2. After I completed the section on the first page about the average body size of women, I felt guarded about answering the questions in this survey. . . . .	1	2	3	4	5
3. After I completed the section on the first page about my own height and weight, I felt guarded about answering the questions in this survey. . . . .	1	2	3	4	5

**THANK YOU VERY MUCH FOR COMPLETING THESE QUESTIONS.**

## Appendix B

### Percentages of Participants' Responses To the Beliefs in Body Size Norms Scale

	Strongly Disbelieve	Disbelieve	Neutral	Believe	Strongly Believe
Women who embody the thin image portrayed by the media are actually the <b>norm</b> rather than the <b>exception</b> of body size among women.	43.0	39.5	11.6	4.7	1.2
A woman who is 5'8" and weighs 122 lbs represents the average UT student.	41.3	39.5	12.8	6.4	0.0
A woman who is 5'8" and weighs 122 lbs represents the reasonable, achievable, ideal attractive UT student.	22.7	31.4	16.9	26.7	2.3
A woman who is 5'8" and weighs 122 lbs does <b>not</b> represent the reasonable, achievable, ideal attractive UT student.	18.8	35.3	22.9	20.6	2.4
Women who embody the thin image portrayed by the media are actually the <b>exception</b> rather than the <b>norm</b> of body size among women.	41.3	40.1	11.6	5.8	1.2
A woman who is 5'4" and weighs 140 lbs represents the average UT student.	8.7	40.1	22.1	22.7	6.4
A woman who is 5'4" and weighs 140 lbs represents the reasonable, achievable, ideal attractive UT student.	4.7	13.4	29.7	36.0	16.3

## Appendix C

# TEAPOTS & TASSELS: Pretest

**PLEASE ANSWER ALL OF THE FOLLOWING QUESTIONS:**

	Ethnicity	Father/father figure's education	Mother/mother figure's education
Age _____	Asian _____	Grade School Graduate _____	Grade School Graduate _____
	Black _____	Some High School _____	Some High School _____
	Hispanic _____	High School Graduate _____	High School Graduate _____
Year _____	Native American _____	Some College _____	Some College _____
in _____	White _____	College Graduate _____	College Graduate _____
College _____	Other _____	Advanced Degree _____	Advanced Degree _____

**Here are a number of words and phrases that describe different feelings and emotions. Read each item and circle the response that indicates how you are currently feeling.**

	very slightly or not at all	a little	moderately	quite a bit	extremely
1. Sad . . . . .	1	2	3	4	5
2. Blue. . . . .	1	2	3	4	5
3. Depressed . . . . .	1	2	3	4	5
4. Downhearted. . . . .	1	2	3	4	5
5. Alone. . . . .	1	2	3	4	5
6. Lonely . . . . .	1	2	3	4	5
7. Guilty. . . . .	1	2	3	4	5
8. Ashamed . . . . .	1	2	3	4	5
9. Blameworthy. . . . .	1	2	3	4	5
10. Angry at self . . . . .	1	2	3	4	5
11. Disgusted with self . . . . .	1	2	3	4	5
12. Dissatisfied with self. . . . .	1	2	3	4	5
13. Angry. . . . .	1	2	3	4	5
14. Hostile. . . . .	1	2	3	4	5
15. Irritable . . . . .	1	2	3	4	5
16. Scornful. . . . .	1	2	3	4	5
17. Disgusted. . . . .	1	2	3	4	5
18. Loathing. . . . .	1	2	3	4	5
19. Anxious. . . . .	1	2	3	4	5
20. Worried . . . . .	1	2	3	4	5
21. Afraid . . . . .	1	2	3	4	5
22. Scared . . . . .	1	2	3	4	5
23. Frightened . . . . .	1	2	3	4	5
24. Nervous . . . . .	1	2	3	4	5
25. Jittery. . . . .	1	2	3	4	5
26. Shaky. . . . .	1	2	3	4	5

**For each group of statements, read all four sentences and circle the one that best describes the way you currently feel. Be sure to read all the statements in each group before making your choice.**

1.
  1. I do not feel sad.
  2. I feel sad or blue.
  3. I am blue or sad all the time and I can't snap out of it.
  4. I am so sad or unhappy that I can't stand it.
2.
  1. I do not feel that the future is hopeless and that things cannot improve.
  2. I feel discouraged about the future.
  3. I feel I have nothing to look forward to.
  4. I feel that the future is hopeless and that things cannot improve.
3.
  1. I do not feel like a failure.
  2. I feel I have failed more than the average person.
  3. As I look back on my life, all I can see is a lot of failures.
  4. I feel I am a complete failure as a person (parent, husband, wife).
4.
  1. I am not particularly dissatisfied.
  2. I don't enjoy things the way I used to.
  3. I don't get satisfaction out of anything anymore.
  4. I am dissatisfied with everything.
5.
  1. I don't feel particularly guilty.
  2. I feel bad or unworthy a good part of the time.
  3. I feel quite guilty.
  4. I feel as though I am very bad or worthless.
6.
  1. I don't feel disappointed in myself.
  2. I am disappointed in myself.
  3. I am disgusted with myself.
  4. I hate myself.
7.
  1. I don't have any thoughts of harming myself.
  2. I feel I would be better off dead.
  3. I have definite plans about committing suicide.
  4. I would kill myself if I had the chance.
8.
  1. I have not lost interest in other people.
  2. I am less interested in other people than I used to be.
  3. I have lost most of my interest in other people and have little feeling for them.
  4. I have lost all of my interest in other people and don't care about them at all.
9.
  1. I make decisions about as well as ever.
  2. I try to put off making decisions.
  3. I have great difficulty in making decisions.
  4. I can't make any decisions at all any more.
10.
  1. I don't feel that I look any worse than I used to.
  2. I am worried that I am looking old or unattractive.
  3. I feel that there are permanent changes in my appearance and they make me look unattractive.
  4. I feel that I am ugly or repulsive-looking.
11.
  1. I can work about as well as before.
  2. It takes extra effort to get started at doing something.
  3. I have to push myself very hard to do anything.
  4. I can't do any work at all.
12.
  1. I don't get more tired than usual.
  2. I get tired more easily than I used to.
  3. I get tired from doing anything.
  4. I get too tired to do anything.
13.
  1. My appetite is no worse than usual.
  2. My appetite is not as good as it used to be.
  3. My appetite is much worse now.
  4. I have no appetite at all anymore.



**Please indicate your satisfaction with the following:**

	extremely satisfied	moderately satisfied	neutral	moderately dissatisfied	extremely dissatisfied
1. Weight. ....	1	2	3	4	5
2. Figure or physique. ....	1	2	3	4	5
3. Appearance of stomach. ....	1	2	3	4	5
4. Body build. ....	1	2	3	4	5
5. Waist. ....	1	2	3	4	5
6. Thighs. ....	1	2	3	4	5
7. Buttocks. ....	1	2	3	4	5
8. Hips. ....	1	2	3	4	5
9. Legs. ....	1	2	3	4	5
10. Shoulders. ....	1	2	3	4	5
11. Arms. ....	1	2	3	4	5
12. Size of stomach. ....	1	2	3	4	5
13. Height. ....	1	2	3	4	5
14. Upper thighs. ....	1	2	3	4	5
15. Bottom. ....	1	2	3	4	5

**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.**

## Appendix D

# TEAPOTS & TASSELS: Posttest

PLEASE ANSWER ALL OF THE FOLLOWING QUESTIONS:

What is your height? \_\_\_\_\_

What is your weight? \_\_\_\_\_

What is your ideal weight? \_\_\_\_\_

What is the weight that you believe others think you ought to weigh? \_\_\_\_\_

Here are a number of words and phrases that describe different feelings and emotions. Read each item and circle the response that indicates how you are currently feeling.

	very slightly or not at all	a little	moderately	quite a bit	extremely
1. Sad . . . . .	1	2	3	4	5
2. Blue. . . . .	1	2	3	4	5
3. Depressed . . . . .	1	2	3	4	5
4. Downhearted. . . . .	1	2	3	4	5
5. Alone. . . . .	1	2	3	4	5
6. Lonely . . . . .	1	2	3	4	5
7. Guilty. . . . .	1	2	3	4	5
8. Ashamed . . . . .	1	2	3	4	5
9. Blameworthy. . . . .	1	2	3	4	5
10. Angry at self . . . . .	1	2	3	4	5
11. Disgusted with self . . . . .	1	2	3	4	5
12. Dissatisfied with self. . . . .	1	2	3	4	5
13. Angry. . . . .	1	2	3	4	5
14. Hostile. . . . .	1	2	3	4	5
15. Irritable . . . . .	1	2	3	4	5
16. Scornful. . . . .	1	2	3	4	5
17. Disgusted. . . . .	1	2	3	4	5
18. Loathing. . . . .	1	2	3	4	5
19. Anxious. . . . .	1	2	3	4	5
20. Worried . . . . .	1	2	3	4	5
21. Afraid . . . . .	1	2	3	4	5
22. Scared . . . . .	1	2	3	4	5
23. Frightened . . . . .	1	2	3	4	5
24. Nervous . . . . .	1	2	3	4	5
25. Jittery. . . . .	1	2	3	4	5
26. Shaky. . . . .	1	2	3	4	5

**For each group of statements, read all four sentences and circle the one that best describes the way you currently feel. Be sure to read all the statements in each group before making your choice.**

1.
  1. I do not feel sad.
  2. I feel sad or blue.
  3. I am blue or sad all the time and I can't snap out of it.
  4. I am so sad or unhappy that I can't stand it.
  
2.
  1. I do not feel that the future is hopeless and that things cannot improve.
  2. I feel discouraged about the future.
  3. I feel I have nothing to look forward to.
  4. I feel that the future is hopeless and that things cannot improve.
  
3.
  1. I do not feel like a failure.
  2. I feel I have failed more than the average person.
  3. As I look back on my life, all I can see is a lot of failures.
  4. I feel I am a complete failure as a person (parent, husband, wife).
  
4.
  1. I am not particularly dissatisfied.
  2. I don't enjoy things the way I used to.
  3. I don't get satisfaction out of anything anymore.
  4. I am dissatisfied with everything.
  
5.
  1. I don't feel particularly guilty.
  2. I feel bad or unworthy a good part of the time.
  3. I feel quite guilty.
  4. I feel as though I am very bad or worthless.
  
6.
  1. I don't feel disappointed in myself.
  2. I am disappointed in myself.
  3. I am disgusted with myself.
  4. I hate myself.
  
7.
  1. I don't have any thoughts of harming myself.
  2. I feel I would be better off dead.
  3. I have definite plans about committing suicide.
  4. I would kill myself if I had the chance.
  
8.
  1. I have not lost interest in other people.
  2. I am less interested in other people than I used to be.
  3. I have lost most of my interest in other people and have little feeling for them.
  4. I have lost all of my interest in other people and don't care about them at all.
  
9.
  1. I make decisions about as well as ever.
  2. I try to put off making decisions.
  3. I have great difficulty in making decisions.
  4. I can't make any decisions at all any more.
  
10.
  1. I don't feel that I look any worse than I used to.
  2. I am worried that I am looking old or unattractive.
  3. I feel that there are permanent changes in my appearance and they make me look unattractive.
  4. I feel that I am ugly or repulsive-looking.
  
11.
  1. I can work about as well as before.
  2. It takes extra effort to get started at doing something.
  3. I have to push myself very hard to do anything.
  4. I can't do any work at all.
  
12.
  1. I don't get more tired than usual.
  2. I get tired more easily than I used to.
  3. I get tired from doing anything.
  4. I get too tired to do anything.
  
13.
  1. My appetite is no worse than usual.
  2. My appetite is not as good as it used to be.
  3. My appetite is much worse now.
  4. I have no appetite at all anymore.

**Please indicate your satisfaction with the following:**

	extremely satisfied	moderately satisfied	neutral	moderately dissatisfied	extremely dissatisfied
1. Weight. . . . .	1	2	3	4	5
2. Figure or physique. . . . .	1	2	3	4	5
3. Appearance of stomach. . . . .	1	2	3	4	5
4. Body build. . . . .	1	2	3	4	5
5. Waist. . . . .	1	2	3	4	5
6. Thighs. . . . .	1	2	3	4	5
7. Buttocks. . . . .	1	2	3	4	5
8. Hips. . . . .	1	2	3	4	5
9. Legs. . . . .	1	2	3	4	5
10. Shoulders. . . . .	1	2	3	4	5
11. Arms. . . . .	1	2	3	4	5
12. Size of stomach. . . . .	1	2	3	4	5
13. Height. . . . .	1	2	3	4	5
14. Upper thighs. . . . .	1	2	3	4	5
15. Bottom. . . . .	1	2	3	4	5

**Please circle the response that reflects your agreement with these statements over the past week:**

	strongly disagree	disagree	neutral	agree	strongly agree
1. Slim women are more attractive . . . . .	1	2	3	4	5
2. Tall women are more attractive. . . . .	1	2	3	4	5
3. Women with toned bodies are more attractive . . . . .	1	2	3	4	5
4. Women who are in shape are more attractive . . . . .	1	2	3	4	5
5. Slender women are more attractive. . . . .	1	2	3	4	5
6. Women with long legs are more attractive . . . . .	1	2	3	4	5
7. Curvy women are more attractive . . . . .	1	2	3	4	5
8. Shapely women are more attractive. . . . .	1	2	3	4	5

**How much do you agree with these statements?**

	strongly disagree	disagree	neutral	agree	strongly agree
1. I feel that I have a number of good qualities. . . . .	1	2	3	4	5
2. All in all, I am inclined to feel that I am a failure. . . . .	1	2	3	4	5
3. I am able to do things as well as most other people . . . . .	1	2	3	4	5
4. I do not have much to be proud of. . . . .	1	2	3	4	5
5. I have a positive attitude toward myself. . . . .	1	2	3	4	5
6. I wish I could have more respect for myself . . . . .	1	2	3	4	5
7. I feel useless at times. . . . .	1	2	3	4	5
8. At times I think I am no good at all. . . . .	1	2	3	4	5
9. On the whole, I am satisfied with myself. . . . .	1	2	3	4	5

**Please answer these questions as they apply to your relationship with your friends and parents/parent-figures over the last 6 months:**

	strongly disagree		neutral		strongly agree
1. I could count on my parent(s) to be there when I needed them. . . . .	1	2	3	4	5
2. My parent(s) treated me with respect and admiration . . . . .	1	2	3	4	5
3. My parent(s) gave me good advice about how to handle problems . . . . .	1	2	3	4	5
4. I did enjoyable things with my parent(s) . . . . .	1	2	3	4	5
5. My parent(s) really cared about me . . . . .	1	2	3	4	5
6. I shared my private feelings with my parent(s) . . . . .	1	2	3	4	5
7. I could count on my friends to be there when I needed them. . . . .	1	2	3	4	5
8. My friends treated me with respect and admiration. . . . .	1	2	3	4	5
9. My friends gave me good advice about how to handle problems I had. . . . .	1	2	3	4	5
10. I did enjoyable things with my friends. . . . .	1	2	3	4	5
11. My friends really cared about me. . . . .	1	2	3	4	5
12. I shared my private feelings with my friends. . . . .	1	2	3	4	5

**Please circle the response that best captures your own experience:**

	none		some		a lot
1. I've felt pressure from my friends to lose weight. . . . .	1	2	3	4	5
2. I've noticed a strong message from my friends to have a thin body. . . . .	1	2	3	4	5
3. I've felt pressure from my family to lose weight . . . . .	1	2	3	4	5
4. I've noticed a strong message from my family to have a thin body. . . . .	1	2	3	4	5
5. I've felt pressure from people I've dated to lose weight. . . . .	1	2	3	4	5
6. I've noticed a strong message from people I've dated to have a thin body. . . . .	1	2	3	4	5
7. Family members tease me about my weight or body shape . . . . .	1	2	3	4	5
8. Other students at school tease me about my weight or body shape. . . . .	1	2	3	4	5

**How much do you believe these statements?**

	strongly disbelieve		neutral		strongly believe
1. The height and weight of the woman in the picture are accurate. . . . .	1	2	3	4	5
2. The woman in the picture represents the average UT student. . . . .	1	2	3	4	5
3. The woman in the picture is the reasonable, achievable, ideal attractive UT student. . . . .	1	2	3	4	5

Do you think the hypothesis was something other than what was presented to you?  
If so, what do you think the hypothesis was?

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**THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.**

## Appendix E

### TEAPOTS & TASSELS: Activities

PLEASE ANSWER ALL OF THE FOLLOWING QUESTIONS:

How many credit hours are you taking this semester? \_\_\_\_\_

How many credit hours do you think the average UT student is taking this semester? \_\_\_\_\_

Please list the courses you are taking this semester.

How many hours per week do you spend studying? \_\_\_\_\_

How many hours per week do you think the average UT student spends studying? \_\_\_\_\_

How many hours per week do you spend working? \_\_\_\_\_

How many hours per week do you think the average UT student spends working? \_\_\_\_\_

How many extracurricular activities are you involved in this semester? \_\_\_\_\_

How many extracurricular activities do you think the average UT student is involved in each semester? \_\_\_\_\_

Please list the extracurricular activities are you involved in this semester.

How many nights per week do you spend partying? \_\_\_\_\_

How many nights per week do you think the average UT student spends partying? \_\_\_\_\_

How many times per week do you participate in other activities such as attending movies, concerts, or guest lecturers? \_\_\_\_\_

How many times per week do you think the average UT student participates in other activities such as attending movies, concerts, or guest lecturers? \_\_\_\_\_

THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.

## Appendix F

### TEAPOTS & TASSELS: Fashion Statement



**Please look carefully at the woman in the picture and consider how she looks.**

**Using the space below, please write a brief statement about the fashion displayed by the woman in the picture in comparison to the average UT student.**

**THANK YOU VERY MUCH FOR COMPLETING THIS FORM.**

## Appendix G

### *Informed Consent to Participate in Research*

#### **The University of Texas at Austin**

You are being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or her representatives will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you do not understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

*Title of Research Study:* Teapots & Tassels

*Principal Investigator, Telephone Number, and Email Address:*

Pamela G. Kronos, M.A.

512-740-8750

pkronos@mail.utexas.edu

*What is the purpose of this study?*

You will be one of 300 participants in a study exploring the average characteristics of UT students.

*What will be done if you take part in this research study?*

If you decide to take part in this study, you will be asked to complete a questionnaire about your activities, work, and classes at UT and those of the average UT student. You will also be asked to complete two questionnaires about your mood and self-perception. Finally, you will be asked to look at a picture of an average UT female student and write a fashion statement. The entire experiment will take approximately 1 hour.

*What are the possible discomforts and risks?*

Although certain mood states may be induced, they will be no more extreme than those experienced in day-to-day activities. However, in the event that any part of the study leaves you feeling distressed or unsettled, you can contact the University of Texas Counseling and Mental Health Center at 512-471-3515. If you have any further questions, you may ask the experimenter now or contact Pamela G. Kronos, M.A. at 512-740-8750.

*What are the possible benefits to you or to others?*

By participating in this experience, you contribute to the body of scientific knowledge on average college student activities, self-perception, mood, and their affects on peoples' behavior.

*If you choose to take part in this study, will it cost you anything.*

No.

*Will you receive compensation for your participation in this study?*

You will receive experimental credit for your PSY 301 course.

*What if you are injured because of the study?*

This study involves minimal risk of injury. However, should any occur, you may contact Pamela G. Kronos, M.A. at 512-740-8750. You may also contact the Counseling and Mental Health Center at 471-3515.



*If you do not want to take part in this study, what other options are available to you?*

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin.

*How can you withdraw from this research study?*

**If you wish to stop your participation in this research study for any reason, you should tell the experimenter. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled.**

**In addition, if you have questions about your rights as a research participant, please contact Clarke A. Burnham, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, at 512-232-4383.**

*How will your privacy and the confidentiality of your research records be protected?*

**Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. Otherwise, your research records will not be released without your consent unless required by law or a court order.**

**If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.**

*Will the researcher benefit from your participation in this study?*

The researcher will not benefit from your participation in any way other than the completion of her dissertation.

*Signatures:*

**As a representative of this study, I have explained the purpose, procedures, benefits, and risks that are involved in this research study:**

---

Signature and printed name of person obtaining consent

Date

**You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this Consent Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.**

---

Printed Name of Subject

Date

---

Signature of Subject

Date

## Appendix H

### *Post-Debriefing Consent*

#### Information About the Study

Thank you for participating in our experiment! Because of the nature of the study, we could not tell you about its true nature until you had completed it. The purpose of this form is to inform you of the study's real intent.

We told you that the purpose of this experiment was to explore the average characteristics of UT students. However, the experiment's true purpose was to study the effect of social pressures to be thin on a woman's body image and mood. The condition to which you were assigned depended on the picture you saw and the information provided. Some participants saw a picture of a model-thin UT student with information about her being the average attractive UT student, while others were informed that she was not the average attractive UT student. Other participants viewed this picture without the additional information. Some participants saw a picture of the same UT student who had been altered to look like the height and weight of the average American woman, along with the information about her being the average attractive UT student, and others viewed this picture without the additional information.

Now that you have been given a full explanation about the experiment, we would like your permission to use your data for research purposes. The information we obtained from you during the course of this study will be kept completely confidential. Your decision about your data will not in any way affect your future relations with the University of Texas nor will it affect your grade assignment in PSY 301. You are not required to give us permission to use your data in order to obtain credit for this experiment.

Please complete the following:

**Now that I know the true purpose of this study and the information that has been obtained, I (do) (do not) [circle one] give my permission for the researcher to use the data collected about me.**

---

Signature of Subject

Date

**Please do not discuss the true purpose of this experiment with other students.** If any questions on the surveys brought to mind unpleasant thoughts or feelings, please contact the University's Counseling and Mental Health Services at 471-3515. If you have further questions, you may also contact Pamela G. Kronos, M.A. at 740-8750.

**Thank you again for your participation.**

## Appendix I

### Information About the Study

Thank you for participating in our experiment! Because of the nature of the study, we could not tell you about its true nature until you had completed it. The purpose of this form is to inform you of the study's real intent.

We told you that the purpose of this experiment was to explore the average characteristics of UT students. However, the experiment's true purpose was to study the effect of social pressures to be thin on a woman's body image and mood. The condition to which you were assigned depended on the picture you saw and the information provided. Some participants saw a picture of a model-thin UT student with information about her being the average attractive UT student, while others were informed that she was not the average attractive UT student. Other participants viewed this picture without the additional information. Some participants saw a picture of the same UT student who had been altered to look like the height and weight of the average American woman, along with the information about her being the average attractive UT student, and others viewed this picture without the additional information.

**Please do not discuss the true purpose of this experiment with other students.** If any questions on the surveys brought to mind unpleasant thoughts or feelings, please contact the University's Counseling and Mental Health Services at 471-3515. If you have further questions, you may also contact Pamela G. Kronen, M.A. at 740-8750.

**Thank you again for your participation.**

## *The Road to a Happy and Healthy Body*

The media continually bombards women with images of ultra-thin, attractive models. Living in our culture, it is not surprising that many women feel that they have to look a certain way to be happy or even healthy. Some women even think that dieting is a normal or necessary part of life. Constant concern, however, about body weight and shape, fat grams, and calories can lead to body dissatisfaction. Engaging in behaviors in order to be thin—such as constantly weighing oneself, skipping meals, counting calories, or over-exercising—can spin out of control and develop into a serious, life-threatening eating disorder. Even though these behaviors may not progress to a full-blown eating disorder, many women miss out on living their lives because they spend so much of their time and energy dieting.

Healthy people have a body mass index (BMI) between 18.5 and 26. To calculate your BMI, divide your weight in pounds by your height in inches squared and then multiply by 703. Would you be surprised to know that the average fashion model has an *unhealthy* BMI of 17.7?

You can take steps to a positive body image by considering the following ten suggestions, which can help you think about new ways of looking more healthfully and happily at yourself and your body. The more you do that, the more likely you are to feel good about who you are and the body you naturally have.

1. Appreciate all that your body can do. Every day your body carries you closer to your dreams. Celebrate all of the amazing things your body does for you—running, dancing, breathing, laughing, dreaming, etc.
2. Keep a top-ten list of things that you like about yourself—things that are not related to how much you weigh or what you look like. Read your list often. Add to it as you become aware of more things to like about you.
3. Remind yourself that true beauty is not simply skin-deep. When you feel good about yourself and who you are, you carry yourself with a sense of confidence, self-acceptance, and openness that makes you beautiful regardless of whether you physically look like a supermodel.
4. Look at yourself as a whole person. When you see yourself in a mirror or in your mind, choose not to focus on specific body parts. See yourself as you want others to see you—as a whole person.
5. Surround yourself with positive people. It is easier to feel good about yourself and your body when you are around others who are supportive and who recognize the importance of liking you just as you naturally are.
6. Shut down those voices in your head that tell you your body is not “right” or that you are a “bad” person. You can overpower those negative thoughts with positive ones. The next time you start to tear yourself down, build yourself back up with a few quick affirmations that work for you.
7. Wear clothes that are comfortable and that make you feel good about your body. Work with your body, not against it.
8. Become a critical viewer of social and media messages. Pay attention to images, slogans, or attitudes that make you feel bad about yourself or your body. Protest these messages: Write a letter to the advertiser or talk back to the image or message.
9. Do something nice for yourself—something that lets your body know that you appreciate it. Take a bubble bath or a nap or find a peaceful place to relax.
10. Use the time and energy that you might have spent worrying about food, calories, and your weight to do something to help others. Sometimes reaching out to other people can help you feel better about yourself and can make a positive change in the world.

## Appendix J

# CANDELABRA



PLEASE ANSWER ALL OF THE FOLLOWING QUESTIONS:

Age \_\_\_\_\_

Gender: Female \_\_\_\_\_ Male \_\_\_\_\_

Year in College \_\_\_\_\_

Ethnicity: Asian \_\_\_\_\_ Black \_\_\_\_\_ Hispanic \_\_\_\_\_ Native American \_\_\_\_\_ White \_\_\_\_\_ Other \_\_\_\_\_

Please look carefully at the woman in the picture. How believable is the following statement: The woman in the picture is 5'4" and weighs 140 lbs.

Not At All Believable	Somewhat Believable	Believable	Very Believable	Extremely Believable
1	2	3	4	5

THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.

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## **Vita**

Pamela Gayle Krones was born in Cedar Grove, New Jersey on August 15, 1965, the daughter of Harold S. Krones and Sally Burr Krones. After graduating from Memorial High School, Cedar Grove, New Jersey, in 1983, she entered Franklin & Marshall College in Lancaster, Pennsylvania. Majoring in philosophy, Ms. Krones received the degree of Bachelor of Arts from Franklin & Marshall College in May, 1987. She worked on survey research for the National Science Foundation for six years while pursuing a counseling degree part-time at The George Washington University. She received the degree of Master of Arts in Education and Human Development from The George Washington University in May, 1998. In August, 2001, Ms. Krones entered the doctoral program in clinical psychology at the University of Texas at Austin. She received the degree of Master of Arts in Clinical Psychology in December, 2003. Ms. Krones is married to Ted von Hippel, Ph.D., a Research Scientist in the Department of Astronomy at the University of Texas at Austin and Professor of Physics and Astronomy at Siena College in Loudonville, New York.

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This dissertation was typed by the author.