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The Impact of the Ideal Thin Body Image on Women

Nicole Hawkins

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THE IMPACT OF THE IDEAL THIN
BODY IMAGE ON WOMEN

by

Nicole Hawkins

A dissertation submitted in partial fulfillment
of the requirements for the degree
of
DOCTOR OF PHILOSOPHY
in
Psychology

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1999
Researchers and clinicians have postulated that the thin-ideal image portrayed in the media leads to body dissatisfaction and negative self-appraisals among women; however, there is little research that has directly examined the effects of these images on women. The purpose of this research investigation was to experimentally examine the effects of exposure to the thin-ideal on women’s affect, self-esteem, body satisfaction, and level of internalization of the thin body image. This study also assessed how the thin-ideal image differentially impacted women with a diagnosed eating disorder.

College women (N = 145) were randomly exposed to photographs from popular magazines containing either thin-ideal images or neutral images (nonmodels).

The results indicated that exposure to the thin-ideal images produced body dissatisfaction, negative mood states, and lowered self-estees. It was also expected that exposure to the thin body image would result in higher levels of internalization of the
thin-ideal; however, the results indicated that women exposed to these images had significantly lower levels of internalization compared to women in the neutral condition. The results also suggest that women with eating disorders exhibited significantly more body dissatisfaction and depression after exposure to the thin-ideal relative to all other subgroups of women. Implications for prevention of eating disorders and areas of future research are discussed.
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CHAPTER I
INTRODUCTION AND PROBLEM STATEMENT

Research over the last two decades has indicated that the incidence of eating disorders appears to be increasing (Nagel & Jones, 1992; Schwartz, Thompson, & Johnson, 1982; Shaw & Waller, 1996; Silverstein, Perdue, Peterson, & Kelly, 1986). Health care professionals have reported what some consider to be epidemic rates of these disorders in recent years, particularly among adolescents (Leon, Fulkerson, Perry, & Dube, 1994; Nagel & Jones, 1992). One extreme (but probably inflated) estimate is that 20% of the total female population between the ages of 12 and 30 suffer from a major eating disorder; this may represent a 10% increase from three decades ago (Nagel & Jones, 1992).

Although most researchers concur that the number of new cases of eating disorders is increasing, there is less agreement about the factors that may be promoting this increase. Sociocultural factors are thought to play a central etiological role, and have received the most research attention in the last decade (Garfinkel, Garner, & Goldbloom, 1987; McCarthy, 1990; Murray, Touzy, & Beumont, 1996; Stice & Shaw, 1994). Specifically, many theorists strongly believe that our culture’s ultraslender ideal-body image (or thin-ideal) portrayed in the media has been a critical contributor (Garner, Garfinkel, Schwartz, & Thompson, 1980; Hamilton & Waller, 1993; McCarthy, 1990; Silverstein et al., 1986; Stice & Shaw, 1994; Striegel-Moore, Silberstein, & Rodin, 1986). The thin-ideal woman is actually a caricature; she is well below the average weight of typical women in our culture, and is portrayed as optimally successful, desirable, and
happy (McCarthy, 1990; Schmidt, Hodes, & Treasure, 1992). Sociocultural theorists also argue that the thin-ideal depicted in the media has become significantly thinner over the last several decades and, therefore, the discrepancy between the thin-ideal and the average woman has increased. This, combined with the intense focus on dieting in our culture, has reportedly helped promote the current epidemic rates of eating disorders (Akan & Grilo, 1995; Davis & Yager, 1992; Kiemle, Slade, & Dewey, 1987; Silverstein et al., 1986; Stice, Schupak-Neuberg, Shaw, & Stein, 1994).

According to the sociocultural model of eating disorders, young girls in our society quickly learn that thinness elicits many forms of social reinforcement, achievement, and rewards, whereas obesity is associated with various social punishments such as social isolation (Johnson, Tobin, & Steinberg, 1989). Therefore, repeated exposure to the successful thin-ideal portrayed by the media leads some girls and women to overinternalize the stereotype (Striegel-Moore et al., 1986). That is, women’s perception of the typically dramatic discrepancy between their body shape and size, relative to the cultural ideal, is thought to produce heightened body dissatisfaction and depressed moods, and prompts them to set unrealistic body-dimension goals for themselves. It is argued that as young girls are repeatedly exposed to thin-ideal images they will begin to internalize this thin-ideal. Theorists argue that with the thin-ideal becoming even thinner in recent years, many young women are finding it increasingly impossible to achieve an ultraslim body form. They begin to take more drastic measures to control their body weight and develop negative feelings about themselves and their body (Striegel-Moore et al., 1986). A vicious cycle is started, because growing body
dissatisfaction is thought to lead to increased dieting and use of extreme measures to lose weight in some women (Stice et al., 1994; Stormer & Thompson, 1996).

Sociocultural researchers have compiled a plenitude of indirect evidence linking the decreasing size of the thin-ideal in the media and intense focus on dieting in our culture to increasing rates of eating disorders. However, few research investigations have attempted to directly examine whether a relationship exists between the thin-ideal image portrayed in the media, and women’s satisfaction with their own bodies. The small number of studies that have experimentally assessed the impact of media exposure on women’s self-evaluation and satisfaction with their bodies has produced mixed results. There are only a couple of studies that have examined media exposure and internalization of the thin-ideal and these have found no direct relationship. Many of these studies have also been plagued with methodological problems (e.g., nonrandom assignment, subjects’ awareness that media exposure was related to the measurement of their reactions to it, and questionable assessment measures).

Given the prevalence of eating disorders, empirical evidence is needed to determine whether there is a relationship between the thin-ideal image depicted in the media, and women’s dissatisfaction with their bodies. The primary purpose of this research was to experimentally assess whether exposure to the thin-ideal image portrayed in the media impacted women’s self-evaluation and satisfaction with their bodies. Also of interest was the question of whether exposure to these ultraslender images led to high internalization of the thin-ideal in young women, because it was thought that repeated exposure led to overinternalization.
Research linking women’s reactivity to media images of thinness, self-appraisal, and eating symptomatology may have implications for understanding social conditioning factors in the maintenance of eating problems. That is, exposure to ideal images of extreme thinness may, in some women, elicit self-dissatisfaction, depressed moods, and so forth. This, in turn, might lead to food restriction and dieting as a general escape/avoidance strategy (negative reinforcement). Such a conditioned pattern may help sustain eating disorder symptomatology.
CHAPTER II
REVIEW OF THE LITERATURE

This review of literature examines theory and research data supporting the suggestion that a relationship exists between the thin-ideal portrayed in the media and eating pathology in women. First, a brief summary of how the sociocultural model may account for the increasing rates of eating disorders is provided. In addition, the review addressed the hypothesized mechanisms (i.e., negative affect, internalization of thin-ideal stereotype) believed to link exposure to the thin-ideal with effects on women’s body satisfaction, esteem, and mood states.

The present review also summarized two main lines of research that sociocultural theorists believe are consistent with the notion that exposure to media that showcases thin-ideal models may be related to body dissatisfaction and eating disorder symptoms. The first line of evidence involved studies that had documented the changing shape of the "ideal" woman in popular media across time, and related these changes to increases in the incidence of eating disorders. The second line of evidence involved studies where researchers assessed successive changes in recent years in the content of advertising by the media, and then drew inferences about increases in evidence of eating disorders.

The final objective of this review was to summarize research directly examining the purported relationship between media exposure and eating pathology. To address this objective, a meta-analysis was conducted to summarize what is presently known about how media exposure to the thin-ideal might impact individuals in terms of various
measures of self-evaluation, body satisfaction, and so forth.

Sociocultural Theory

The sociocultural model is based on the premise that societal factors, particularly those involving the printed and video media, offer powerful messages to girls and young women regarding the (un)acceptability of certain physical attributes (DiNicola, 1990; Harrison & Cantor, 1997; Heinberg, Thompson, & Stormer, 1995; Rozin & Fallon, 1988; Shaw & Waller, 1996; Stormer & Thompson, 1996). Banks (1992) has argued that most of the social science research on eating disorders implicates cultural pressure on women to maintain thin bodies, and that our culture focuses on dieting to attain slimness (which, in turn, is equated with beauty, happiness, and success). According to this conception, eating disorders are caused primarily by strong social modeling directed at women, that is rooted in an unrealistic, thin-ideal body form. The social learning theory (Bandura, 1977) and the process of modeling offer a theoretical explanation on how the mass media may relate to eating disorders. According to Harrison and Cantor (1997), two components within the social learning model, prevalence and incentives, provide an explanation of how dieting behaviors may be socially learned through the media. According to social learning theory, the more prevalent an event, the more likely it is to be modeled (Bandura, 1977). As this review established, magazines are filled with thin-ideal models and dieting ads, and as images of the thin-ideal and dieting prevail, modeling of dieting behaviors should also prevail (Harrison & Cantor, 1997). In terms of incentives, external incentives motivate modeled behavior on the basis of anticipated reward and social
acceptance. Vicarious incentives can also come through the media as one observes that thin, active women receive attention and are portrayed as successful by the media. Many ads in magazines directed at young girls and women are filled with images of ultrathin women that have it all—designer clothes, jewelry, corporate jobs, and a handsome man. These types of incentives could explain why young women would engage in extreme dieting behaviors (delayed-reward behaviors).

Achieving thinness often results in a significant increase in attention and appraisals (incentives) from others (Killen et al., 1994). Indeed, one study has found that girls who were thin reported being more attractive, popular, and successful academically than heavier girls (Killen et al., 1993). Research has shown that many women also report a dramatic increase in their perception of their social desirability or popularity, as a result of weight loss (Cantrell & Ellis, 1991; Johnson et al., 1989).

This thin-ideal body form that is salient in the media is defined as women portrayed in the media that are well below the average weight of typical women (usually 15% below) and represents an unrealistic standard for women in terms of attractiveness and thinness (tall, narrow-hipped, long legs, thin thighs; Johnson et al., 1989). This thin-ideal body style is biogenetically difficult for the majority of women to achieve. This ideal stresses slimness, youth, and androgyny, rather than the normative female body (Attie & Brooks-Gunn, 1989; Banks, 1992).

Pressure to Conform

In 1973, Bruch argued that the increasing prevalence of eating disorders was a
"sociocultural epidemic" that was resulting in women taking drastic measures to change their shapes. Now 25 years later, young girls and women are involved in extreme weight loss measures and feel overwhelming pressure for their body to conform to this thin-ideal. Why do women feel pressure to change their bodies and lose weight? Pursuit of thinness by females can be understood as both culturally bound and incorporated in the female stereotype (Nagel & Jones, 1992). Bruch (1973) believes that the fashion industry may indirectly affect vulnerable adolescents who come to believe that weight control will lead to beauty and success. Research has revealed many factors that may make young girls and women vulnerable to develop an eating disorder. The factors that are purported to contribute significantly to young girls being at risk for developing eating disorders include: being above average weight, the practice of dietary restraint, low self-esteem, and depression (Hsu, 1989). As Striegel-Moore et al. (1986) stated, "Young girls learn that being attractive is intricately interwoven with pleasing and serving others and, in turn, will secure love" (p. 249). Young girls are thought to compare themselves to women who are portrayed as successful in the media, assessing how closely they match up to the body form "ideal" (Carruth & Goldberg, 1990). Richins (1991) found that young girls reported comparing themselves with the images of women used in the media, and those comparisons led the girls to be less satisfied with their own appearance. In a study by Murray et al. (1996), they surveyed adolescent girls in terms of how they feel the media impacts them. One anorectic commented, "I think I’m easily led by magazine articles and diets. Television--not so much now, but earlier on--it portrayed a perfect body image, and everyone had to be like that" (age 16; p. 44). A bulimic (age 21)
commented, "I am tremendously affected by magazines. Well, they’ve portrayed the way which they feel we should eat and look, and I’ve sort of followed blindly along behind" (p. 44).

Unfortunately, research suggests that though they strongly desire it, most females cannot attain the cultural body form "ideal." Consequently, they become extremely dissatisfied with their bodies (Gutwill, 1994; Striegel-Moore et al., 1986; Stormer & Thompson, 1996). Indeed, it appears that most girls and women in our society are dissatisfied with their bodies (Hsu, 1989, 1990; Iancu, Spivak, Ratzoni, Apter, & Weizman, 1994). For example, Wardle and Marsland (1990) surveyed 846 adolescents, with results suggesting that weight concern and dissatisfaction were high for girls, with more than 50% feeling they were too fat and wanted to lose weight. In another study by Wooley and Wooley (1985), 63% of 33,000 female respondents indicated that body weight was a key determinant of how they felt about themselves, and the majority of women indicated that they were not pleased with their body or weight.

Because the majority of women are dissatisfied with their bodies, why do not all women develop eating disorders? Many factors are hypothesized (i.e., genetic, personality, sociocultural, biological) to make some individuals more prone to eating disorders than others (Dolan, 1991; Smith, 1993; White, 1992a, 1992b). Most sociocultural theorists also agree that no one factor leads to eating pathology. Theorists assert that exposure to the thin-ideal may be a significant factor in the development of eating disorders, and there are two proposed mechanisms that may mediate the negative effects of exposure to the thin-ideal. The next section of the review addresses the mechanisms of action.
Mechanism of Action for the Effects of Thin-Ideal Exposure

Stice and Shaw (1994) has argued that there are two possible mechanisms that may mediate the negative effects of exposure to thin-ideal body images. First, they suggest that these images may produce negative mood states or affect in women. Although no causal link between exposure to the thin-ideal and negative affect has been found, a good deal of evidence suggests that mood disturbances are related to eating disorder symptomatology (Dykens & Gerrard, 1986; Gross & Rosen, 1988; Johnson & Larsen, 1982; Katzman & Wolchik, 1984; Polivy, 1981; Schotte, Cools, & McNally, 1990).

Ostensibly, girls are conditioned to make constant social comparisons between themselves and highly reinforced cultural models of ideal femininity. Naturally, most find themselves to be deficient by relative comparison. With repeated exposure to the thin-ideal in the media, young girls have persistent reminders of one’s relative inadequacy and this may elicit negative affect and self-appraisals. Several studies have shown that women with eating pathology will binge or restrict to manage negative affect (e.g., anxiety, depression, feelings of inadequacy; Cash & Brown, 1987; Schupak-Neuberg & Nemeroff, 1993). A number of studies have found that women with eating disorders experience significantly more depression, anxiety, guilt, and shame, and have lower self-esteem than controls (Shisslak, Pazda, & Crago, 1990; Stice & Shaw, 1994; Weiss & Ebert, 1983; Williamson, Cubic, & Gleaves, 1993; Williamson, Kelley, Davis, Ruggiero, & Blouin, 1985). Gross and Rosen (1988) demonstrated that bulimics
exhibited more negative body image, lower self-esteem, and more social anxiety and depression than normal women. Thus, it is speculated that through the effects of modeling and constant social comparisons, exposure to thin-ideal images may, over time, elicit a variety of negative affective states (e.g., depression, anxiety, insecurity).

Second, Stice and Shaw (1994) theorized that exposure to the thin-ideal may also lead to eating pathology by producing an overinternalization of the thin-ideal stereotype. Overinternalization of the thin-ideal is likely evidenced by various attitudes, beliefs, and behaviors regarding motives to achieve thinness or attractiveness. For example, highly frequent and strongly endorsed ideation surrounding the benefits of dieting may reflect such overinternalization as might regularly reading magazines and advertisements pertaining to fashion, compulsive focus on one’s physical appearance, and dieting. Also, this overinternalization may be correlated with the affirmation that pursuit of thinness is the primary mechanism through which young women can become socially popular, successful, and generally happy. It is believed that some women overinternalize the thin-ideal because of the increasing focus in our culture on achievement. It is argued that due to the increasing focus on achievement in our culture some girls and women have been confused about how to express the drive to achieve, and it appears that the pursuit of thinness has become one vehicle for young women to use to compete among themselves and demonstrate self-control (Johnson et al., 1989). In today’s culture, thinness has become a highly valued achievement that secures envy and respect among women. Unfortunately the absence of weight control in our society leads to social discrimination,
isolation, and low self-esteem (Johnson et al., 1989; Wooley & Wooley, 1985). With the push for high achievement, some young girls and women overinternalize the thin-ideal as a way to avoid obesity and it becomes a very concrete activity in which young girls and women could compete and obtain consistently favorable social responses that hold the possibility of enhancing self-esteem.

It is suggested that as women internalize the thin-ideal, heightened body dissatisfaction will almost invariably emerge, and females will set unrealistic body dimension goals. A study by Irving (1990) found that when subjects were exposed to thin images, they evidenced decreased levels of body-esteem. Several other research investigations have found that the degree of body dissatisfaction is strongly related to the severity of eating pathology (Buvat-Herbaut, Hebbingkuys, Lemaire, & Buvat, 1983; Cash, Cash, & Butters, 1983; Mintz & Betz, 1988; Stice et al., 1994).

Finally, Stice et al. (1994) suggested that "internalization of the thin-ideal may also directly produce eating pathology, because even if a woman is satisfied with her body, she may engage in disordered eating behavior to maintain a low weight" (p. 836). Research has shown that the degree of internalization of the thin-ideal stereotype is correlated with severity of eating disorder pathology (Stice et al., 1994). Evidence has also shown that endorsement of the thin-ideal correlates with both bulimic symptoms and subsequent diagnosis of bulimia (Grayson & Medalie, 1989; Kendler et al., 1991; Striegel-Moore et al., 1986). Thus, it is plausible that exposure to the thin-ideal images might result in increased identification with the thin-ideal stereotype.

In sum, chronic exposure to the thin-ideal presented in the media could produce
several adverse effects: a negative affect state, overinternalization of the thin-ideal, body dissatisfaction, and possible eating disorder symptoms as extreme weight loss methods are pursued.

In addition to outlining the sociocultural model and theorized mechanisms of action, the evidence that indirectly links the thin-ideal image with eating pathology will be outlined in the section that follows. This link is very critical, because if the thin-ideal image has become thinner over time and is demonstrated to be a contributing factor in eating pathology, it then becomes an important societal issue.

The "Thinning" Thin-Ideal

As has been noted, there is presently a great discrepancy between society’s thin-ideal and the weight of the average woman. For example, the average size of women in the United States is 5'4" and 142 lb, but the average model is 5'10" and 110 lb (Schneider, 1996). Some theorists argue that this discrepancy may promote more body dissatisfaction in women, and as a result, may lead to eating pathology (McCarthy, 1990). Research suggests that the representation of women in the arts and media in Western cultures has undergone many transformations (Johnson-Sabine, Wood, Mann, & Wakeling, 1985). For instance, there have been many changes in the characteristics of female film stars and models over the past 50 years. Raphael and Lacey (1992) examined the changing shape of famous actresses and models over the last five decades. For example, during World War II, pin-up Betty Grable was considered a cultural "ideal," while actresses Marilyn Monroe (size 14) and Jayne Mansfield enjoyed considerable
fame and popularity in the late 50s and early 60s, due to their shapeliness. However, in the late 60s, the fashionable shape changed significantly; slim women with small breasts, such as the fashion models Twiggy and Jean Shrimpton, became the cultural ideal among the young. Towards the 80s, the cultural ideal changed again. During this period, broad shoulders and noticeable breasts grafted unnaturally (and sometimes surgically) onto an emaciated frame were esteemed (Raphael & Lacey, 1992). Such a cultural ideal may model for girls and young women an essentially anorectic body form.

Besides the anecdotal evidence offered by Raphael and Lacey (1992), seven research projects have generated empirical evidence documenting the changing shape of the ideal body image (Andersen & DiDomenico, 1992; Snow & Harris, 1986). Several key studies examining this issue are briefly discussed here. One of the first landmark studies focusing on the changing shape of ideal body image was conducted by Garner et al. (1980). The purpose of their study was to document the shift toward a thinner ideal shape among ideal characters of femininity in our culture over a 20-year period. Their inference was that this shift was concomitant, which led to social pressures on women, in general, to diet. The researchers obtained height, weight, and measurement data of all 240 monthly Playboy playmates across a 20-year period (1959-1978). They also obtained the same information on Miss America Pageant winners for the same time period. The authors found that the percentage of average weight for age and height decreased significantly over the 20-year period \( (r = .22, p < .001) \). They also found that bust measurements decreased, waists became larger, and hips became smaller. One interesting finding was that all the Miss America winners since 1970 have weighed
significantly less than those in the past. Overall, their results indicated that there was a 10% decrease in weight (relative to height) over the 20-year period. Garner et al. (1980) pointed out that, ironically, because of improved nutrition, the average female under 30 years of age has become heavier in the same 20-year period.

In a recent study, researchers extended the work of Garner et al. (1980) and examined body measurements of Playboy magazine centerfolds and Miss American contestants from 1979 to 1988 (Wiseman, Gray, Mosimann, & Ahrens, 1992). The results indicated that the body size of Miss America contestants decreased during this period, while centerfolds remained at a low level of body weight. The researchers found that over the 10-year period, 69% of Playboy centerfolds, and 60% of Miss America contestants had weights 15% or more below expected weight for their age and height category. The authors pointed out that, according to the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (3rd ed. revised; also 4th ed.; 1987, 1994), maintaining body weight of 15% below expectation is one of the major criteria for anorexia nervosa. Thus, a majority of these "ideal" women in our society may be classified as having one of the major symptoms of an eating disorder.

Researchers have also studied fashion models to determine if the social trend toward media models of unrealistic body forms, noted by Garner et al. (1980), was evident in this special population of high status women. Morris, Cooper, and Cooper (1989) examined changes in the physical features of female fashion models from a modeling agency between 1967-87. The shape of the cohorts of fashion models changed in a number of respects. Overall, models became taller; although their waist size had
increased, there was no corresponding increase in hip measurement. These researchers concluded that the trend found by Garner et al. (1980) was similar among fashion models—bust and hip sizes have decreased relative to waist size in recent years, producing a more tubular shape.

Finally, Silverstein, Perdue et al. (1986) conducted four studies investigating the possible role of the media in promoting a thin standard of attractiveness. They examined popular film actresses, models in magazines, and women from popular television programs from the 1980s. The results indicated that among television actors, 69.1% of female characters could be objectively rated as "thin," while only 17.5% of the males were rated as "thin." Only 5% of the female characters were rated as heavy, compared to 25.5% of the males. The researchers argued that these findings support the notion that women in television and the film industry feel more pressure to be thin than men.

Silverstein, Perdue et al. (1986) also examined two women’s magazines in terms of a standard of bodily attractiveness from 1901-81. The results suggest that the bust-to-waist ratios in both magazines dropped fairly steadily from a high (2.1) at the beginning of the century, to a low (1.1) for the century in 1925 (e.g., 36B x 24W = 1.5). By the late 1940s, the ratio climbed back up (1.7), but has decreased since that time. The authors found that the combined average of the bust-to-waist ratios of the two magazines has been below 1.3 since 1965. The authors noted that this is the longest period for such a small ratio during this century.

In a follow-up study, Silverstein, Peterson, and Perdue (1986) examined anecdotal evidence of eating disorders to determine if the small bust-to-waist ratio was related to
the incidence of eating disorders. They found that one of the earliest magazine articles to refer to eating disorders was titled "Fat and Fashion," appearing in The Saturday Evening Post in 1926. The researchers noted that this first publication (and others) coincided with the bust-to-waist ratio being at its lowest point. They argue that the current concern about eating disorders may be related to the bust-to-waist ratio being at a low for the longest period of time in this century.

In summary, these studies provide strong evidence that women portrayed in the media have become thinner during recent decades and that this change correlates with the increased incidence of eating disorders. Many researchers and theorists speculate that this decrease in size of the "ideal" woman has led many in our society to become dissatisfied with their bodies due to the resultant discrepancy that, in turn, has led to increased eating pathology.

Pervasiveness of Diet Articles and Ads

The second line of evidence suggesting a possible relationship between the media and eating disorders involves investigations of the content of popular women’s and men’s magazines. Of interest are advertisements targeting weight loss and alterations of one’s body shape. As in the preceding section, there have been no integrative reviews in this area. However, results from several landmark studies are provided.

One of the first studies to examine the content of advertising was the study by Garner et al. (1980), discussed earlier. The researchers examined the number of diet articles in six popular women’s magazines over a 20-year period (1959-78). They found
that the number of diet articles significantly increased over the period \( r = .83, p < .001 \). These researchers concluded that the increasing rates of eating disorders correlated with a rise in diet articles.

Since the Garner et al. (1980) study, four other studies have been published that examined the content of magazines. All have found fairly consistent results. Silverstein, Perdue et al. (1986) analyzed the content in male and female magazines and found that more messages to be slim and stay in shape were directed toward women than men. They demonstrated that the women’s magazines contained more diet food advertisements (63:1), more body advertisements and articles (96:12), more total food advertisements (1,179: 15), and more overall food articles (228:10) than men’s magazines. In a similar study by Wiseman et al. (1992), the frequency of diet, weight loss, and exercise articles in six women’s magazines from 1959-88 was examined. They also found a significant increase in both diet articles and exercise articles during this time period.

Snow and Harris (1986) analyzed the weight and diet-related content of five women’s magazines between 1950 and 1983. These researchers found a significant decrease in the number of girdle advertisements. However, at the same time, there was an increase in the number of advertisements for weight-loss-related products, particularly since the middle 1970s. In a recent study by Andersen and DiDomenico (1992), 10 popular men’s and women’s magazines were examined for weight-loss or shape change ads. Women’s magazines contained 10.5 times as many advertisements and articles promoting weight loss as did the men’s magazines. These researchers point out that this is
the same ratio reported from several sources for the ratio of female-to-male prevalence of
anorexia nervosa.

Based on the research analyzing the content of popular magazines, the evidence
clearly shows that the number of diet and shape-change advertisements and articles has
been increasing over the last five decades, and this has coincided with the decrease in size
of the ideal body image. According to sociocultural theorists, the increasing number of
diet articles and the "thinning" of models suggests that changes in the media are also
correlated with increased prevalence of eating disorders. Although many researchers
concur that there is a relationship between the thinning thin-ideal and the increase in
eating pathology, they argue that experimental studies are critical to demonstrate a causal
relationship. Unfortunately, there are only a few investigations that have experimentally
assessed the relationship between the thin-ideal and eating pathology. These studies are
presented in the section to follow.

Review of Media Exposure Studies

The present review summarizes experimental investigations of the relationship
between media exposure and eating pathology. To best present these studies, an
integrative review of the literature was conducted to summarize what is currently known
about how media exposure might impact women in terms of body dissatisfaction,
internalization, self-evaluations, and eating pathology.
Sample Characteristics

The sample characteristics of the eight studies published to date are presented in Table 1. The majority of studies used large samples comprised of college students. Only the Hamilton and Waller (1993) study used a sample that included a subgroup of community subjects (n = 24). The average age of the subjects across all of the studies was 21 (range from 18 to 27). Six of the studies used only female subjects, which is not uncommon in eating disorder research. Only two studies reported subjects’ ethnicity. No studies reported the socioeconomic status of their subjects. In terms of eating pathology, three studies recruited subjects with a diagnosable eating disorder. The other five studies assessed the presence of eating pathology in the overall sample, but did not classify the type of eating disorder present in their subjects. Table 1 illustrates the type of comparisons employed by each study, along with key findings. Table 1 also presents the overall rating of quality for each study and the major weaknesses of each primary study. Primary studies were coded in terms of quality based on a 3-point rating system (1-3). Studies were coded a "1" if there was an experimental and control group and if there were only minor threats to the internal validity of the study. A study was coded as "2" if it was a correlational study with only minor to moderate threats to internal validity, or if the study did have an experimental and control group but had moderate threats to internal validity. Studies that were coded as "3" had to have moderate to severe threats to the internal validity.
Table 1

Overall Characteristics of Studies

<table>
<thead>
<tr>
<th>Study</th>
<th># of Ss</th>
<th>Mean age</th>
<th>Eating pathology</th>
<th>Quality of study</th>
<th>Comparison</th>
<th>ES/R</th>
<th>Key conclusions</th>
<th>Methodology weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stice &amp; Shaw (1994)</td>
<td>157</td>
<td>19</td>
<td>N.R.</td>
<td>1</td>
<td>Assigned to 1 of 3 groups--exposed to ultrathin models, average-sized models or no models.</td>
<td>Body satisfaction -13</td>
<td>Exposure to the thin-ideal produced depression, stress, guilt, shame, insecurity, and body dissatisfaction. Negative affect, body dissatisfaction, and predicted bulimic symptoms.</td>
<td>Low media exposure, post-test only, poor assessment measure.</td>
</tr>
<tr>
<td>Abramson &amp; Valene (1991)</td>
<td>167</td>
<td>22</td>
<td>N.R.</td>
<td>2</td>
<td>Correlational study examining media exposure via survey in relation to eating pathology.</td>
<td>Dietary restraint $t = .17 p &lt; .03$</td>
<td>Significant correlations were found between media use and dietary restraint and media use and bulimic behaviors.</td>
<td>No validity and reliability information of media measure. Ss likely cued to purpose of experiment. Attrition.</td>
</tr>
<tr>
<td>Cash et al. (1983)</td>
<td>51</td>
<td>22</td>
<td>N.R.</td>
<td>2</td>
<td>1 of 3 conditions--exposure to same-sexed stimulus persons who either were not physically attractive, or were designated as attractive professional models</td>
<td>Attractiveness -67</td>
<td>Ss exposed to attractive persons rated their own attractiveness lower than Ss exposed to unattractive individuals. Thumbing through popular magazines may have little immediate effect on self-image of most women, but long-term exposure could.</td>
<td>Small sample size, low exposure time, Ss likely cued to purpose of experiment.</td>
</tr>
<tr>
<td>Waller et al. (1992)</td>
<td>64</td>
<td>18</td>
<td>13 Bulimia</td>
<td>3</td>
<td>1 of 2 conditions--exposure of thin-ideal body images or neutral images</td>
<td>Body-size estimation .14</td>
<td>The results show that the pictures' effects on body size estimation were stronger in those with more pathological eating attitudes in the comparison group.</td>
<td>No random assignment. Ss definitely cued to purpose of experiment. Small sample. Nonblind assessment.</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Study</th>
<th># of Ss</th>
<th>Mean age</th>
<th>Eating pathology</th>
<th>Quality of study</th>
<th>Comparison</th>
<th>ES/R</th>
<th>Key conclusions</th>
<th>Methodology weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stice et al. (1994)</td>
<td>238</td>
<td>20</td>
<td>N.R.</td>
<td>2</td>
<td>Correlational study between media exposure via questionnaire and eating pathology</td>
<td>Gender role $r = .13 p &lt; .05$</td>
<td>Exposure to the media portrayed thin-ideal is related to eating pathology and suggests that women may directly model disordered eating behavior presented in the media.</td>
<td>6-item Media Survey Ss likely cued to purpose of experiment.</td>
</tr>
<tr>
<td>Hamilton &amp; Waller (1993)</td>
<td>48</td>
<td>27</td>
<td>13 Bulimia 11 Anorexia</td>
<td>3</td>
<td>Two groups of women, normal and eating disordered exposed to thin-ideal or neutral images.</td>
<td>Body size Estimation $r = .25 p &lt; .001$</td>
<td>Eating disordered Ss body size overestimation was significantly greater when exposed to pictures of slim women than when exposed to neutral images. Comparison women were not affected.</td>
<td>Small sample, low media exposure, Ss cued to purpose, nonblind assessment, no random assignment.</td>
</tr>
<tr>
<td>Irving (1990)</td>
<td>162</td>
<td>N.R.</td>
<td>N.R.</td>
<td>2</td>
<td>Four conditions--exposed to slides of thin, average, oversize models, or no exposure.</td>
<td>Self-esteem $r = .10$</td>
<td>Exposure to thin models was related to lower self-evaluations regardless of level of bulimic symptoms. Media has an impact on women’s self-evaluations regardless of their level of bulimic symptoms.</td>
<td>Attrition, no random assignment, low media exposure time.</td>
</tr>
<tr>
<td>Harrison &amp; Cantor (1997)</td>
<td>422</td>
<td>20</td>
<td>N.R.</td>
<td>2</td>
<td>Correlational study between media use (via survey) and body drive for thinness in women and men.</td>
<td>Eating pathology $R^2 = .12 p &lt; .00$ Anorexia $R^2 = .13 p &lt; .001$ Bulimia $R^2 = .07 p &lt; .05$ Body dissat. $R^2 = .07 p &lt; .05$ Drive for thinness $R^2 = .07 p &lt; .05$ Perfectionism $R^2 = .03 p &lt; .10$ Ineffectiveness $R^2 = .04 p &lt; .10$</td>
<td>For women, media use predicted disordered-eating symptomatology, drive for thinness, body dissatisfaction, and ineffectiveness. Magazine reading was a more consistent predictor of disordered eating than television viewing.</td>
<td>Poor eating disorder measure, limited media exposure survey.</td>
</tr>
</tbody>
</table>

Note. Variables not reported in study are represented by N.R. Ss = Subjects.
Type of Comparison and Overall Findings

Two of the studies in Table I (Abramson & Valene, 1991; Stice et al., 1994) measured the amount of media exposure subjects believed they received in the last two weeks or past month, and correlated this with the presence of eating pathology. The outcome measures of these studies were similar only on the variable of eating disorder symptomatology. Both found positive, moderate correlations that indicated media exposure was positively related to the presence of eating pathology. A third study (Harrison & Cantor, 1997) examined the relationship between college women’s media use (how often they purchased magazines) and two sets of variables (disordered-eating symptomatology and a set of related variables, including body dissatisfaction and drive for thinness). \( R^2 \) values based on univariate \( F \) tests (df = 9, 217) for each of the criterion variables showed that the set of media consumption variables significantly predicted the following criterion variables: overall disordered eating (\( R^2 = .12, F = 3.79, p < .001 \)); anorexia (\( R^2 = .13, F = 4.18, p < .001 \)); bulimia (\( R^2 = .07, F = 2.07, p < .05 \)); body dissatisfaction (\( R^2 = .07, F = 1.92, p < .05 \)); and drive for thinness (\( R^2 = .07, F = 1.92, p < .05 \)).

The other five studies presented in Table I all included an experimental condition and a control or comparison group. All of these studies exposed one group of subjects to the thin-ideal body image. As the table indicates, diverse outcome measures were used by researchers. Three of the studies reported outcomes on body/weight satisfaction, and found very mixed results. In the Stice and Shaw (1994) study, the findings indicate that subjects who were exposed to a thin-ideal were (modestly) less satisfied with their bodies.
(ES = -.13) than subjects in the control group. However, in the study by Cash et al. (1983), the subjects who were exposed to the thin-ideal reported being more satisfied with their bodies (ES = .31) than the comparison group. In the Irving (1990) study, subjects were no more satisfied nor dissatisfied (ES = .02) with their bodies than the comparison subjects. These standardized mean differences are all relatively small and may be of no practical significance.

There are several other effect sizes that are noteworthy. First, the Stice and Shaw (1994) study suggests that subjects exposed to the thin-ideal models were less confident (ES = -.43) after exposure than control subjects. These same subjects felt more guilt (ES = .55) and shame (ES = .37) after viewing the thin-ideal models than the control group. In the Cash et al. (1983) study, subjects who viewed the thin-ideal felt less attractive (ES = -.67) than the comparison group. However, subjects in the Irving (1990) study felt more attractive (ES = .29) after viewing thin models. One interesting finding is that the subjects in the Stice and Shaw (1994) study exposed to the thin-ideal did not report anxiety (ES = .04) compared to the control group, but did report more stress (ES = .29).

The majority of the researchers concluded that media exposure might be related to increased levels of eating pathology. Irving (1990) concluded that exposure to thin models was related to lower self-evaluations, regardless of level of bulimic symptoms. However, Hamilton and Waller (1993) concluded that exposure to thin models affected women with eating disorders, but had no effect on comparison subjects (noneating
pathology). Their latter study, however, contained numerous methodological weaknesses.

Quality of Studies by Outcome and Methodological Issues

Based on the study quality rating described earlier, only one study in Table 1 was rated as "good" in terms of quality, with the majority of studies being rated as "fair."

Since the Stice and Shaw (1994) study was the only one rated as a "1," it will be briefly described. This study assessed the effects of exposure to the thin-ideal on women's affect, body satisfaction, and endorsement of the thin-ideal stereotype. The authors randomly assigned 157 undergraduate females to groups exposed to pictures from magazines containing either ultrathin models, average-sized models, or no models. The purpose of the study was adequately disguised so subjects were not cued to the fact that their affective and behavioral reactions to media were of direct interest to the researchers. Overall, they had appropriate outcome measures with the exception of assessing negative affect. The short form of the Beck Depression Inventory (Beck & Steer, 1987) was used, which is purportedly a narrow measure of trait negative affect. The authors suggest that future research should use a broader operationalization of negative affect that also examines state negative affect. The only other shortcoming of this study was low media exposure time; there were only 12 images presented in each group.

Two studies in Table 1 were rated as "poor." Both were correlational studies that had very similar procedures. The major problem with these studies was that the subjects definitely seemed to be aware of the purpose of the study. If subjects are informed that
the study is examining how the media impacts how they feel about themselves, they may have consciously monitored and censored self-reports about precisely how the media might affect or influence them. Thus, the issue of subjects being cued to the purpose of the study was a problem in the majority of studies.

Another possible problem in many of the studies might be the low level of media exposure. While there is no consensus about what does or does not constitute adequate exposure, it is assumed that extensive exposure should produce stronger effects. The range of exposure time in studies published to date ranged between 12 and 20 pictures, and viewing time of 3 to 20 seconds, for each thin-ideal image. Thus, the average amount of exposure time in these studies was only about 10 minutes, which may represent a low salience stimulus.

A final methodology problem that may have affected the outcomes of these studies was the control conditions. Several studies used a control condition in which subjects viewed images of homes or other products. However, some studies used a control condition involving pictures of women of "average" weight. This may not have been a true control condition, because most fashion models pictured as "average" weight are still at lower weights than the average woman.

Media Exposure and Internalization

Two research studies examined the relationship between internalization of the thin-ideal body form and exposure to media images (Stice & Shaw, 1994; Stice et al., 1994). Contrary to expectations, Stice and Shaw's (1994) study revealed that there were
no detectable effects of exposure to thin-ideal images on women’s affirmation of the thin-ideal stereotype. Of interest, the results suggested that women in the control condition had higher scores for the endorsement of the thin-ideal stereotype than women in the two exposure groups, although these were not statistically significant differences.

In another study by Stice et al. (1994) that correlated reported media exposure to endorsement of the thin-ideal stereotype, the researchers reported that the findings did not support the predicted effect from media exposure to ideal-body stereotype internalization. The researchers did find that media exposure predicted increased gender-role endorsement and this was, in turn, related to heightened ideal-body stereotype internalization. The researchers concluded that the media could indirectly cause overinternalization by making women overidentify with the female gender-role.

**Media Exposure and Eating Pathology**

Only two studies to date have compared women with eating disorders to women with no eating disorder in a media exposure situation (Hamilton & Waller, 1993; Waller, Hamilton, & Shaw, 1992). Both studies used only one outcome measure, body-size estimation. The results of the these studies, presented in Table 2, indicate that when women with eating disorders viewed the thin-ideal, they were more likely to overestimate the size of their bodies (mES = .28) than women without eating disorders (mES = -.08). However, women without eating pathology did not overestimate their bodies after viewing the thin-ideal. In fact, they slightly underestimated the size of their body. Further, women with eating disorders, who viewed neutral images, were more likely to
Table 2

Media Exposure and Eating Pathology

<table>
<thead>
<tr>
<th>Group</th>
<th>Thin-ideal images</th>
<th>Neutral images</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>mES</td>
</tr>
<tr>
<td>Eating pathology</td>
<td>2</td>
<td>.28</td>
</tr>
<tr>
<td>Normal</td>
<td>2</td>
<td>-.08</td>
</tr>
</tbody>
</table>

overestimate their body size (mES = .53) than women without eating disorders in the same condition.

Additionally, three correlational studies examined the relationship between media exposure (via a survey) and eating pathology (Abramson & Valene, 1991; Harrison & Cantor, 1997; Stice et al., 1994). One study assessed media exposure in a 2-week period prior to the time subjects were assessed, the other study measured the amount of exposure in the past month, and one study assessed number of television shows subjects viewed and popular magazines they subscribed to in the last year. The average Pearson’s correlation coefficient between level of eating pathology and amount of media exposure for these three studies was modest, $r = .20$ (i.e., average variance accounted for was 4% for eating pathology, across these studies).

Review Conclusions

1. Nearly all of the studies conducted to date have examined female college students. College women are at a high risk for evidencing extreme preoccupation with
the culturally sanctioned thin-ideal body type. Also this preoccupation correlates with eating pathology; eating disorders occur almost exclusively among females, but are overrepresented among college women (Johnson & Conners, 1987).

2. The variety of outcome measures reported across the eight studies makes comparisons difficult. However, the common outcome measures indicated quite discrepant findings across these studies. For instance, one study found that women were more satisfied with their bodies or weight after viewing the thin-ideal, while another study found that they were less satisfied. This was also the case for attractiveness, where one study with college bulimic women found they felt more attractive after viewing the thin-ideal; however, another involving college women found they felt less attractive. Given these discrepant findings, additional research is needed to understand the relationship between exposure to the thin-ideal and satisfaction with one’s body and level of attractiveness.

3. In terms of methodology, most of the studies used reasonably standardized measures and large sample sizes. However, as has been noted, the majority of the studies appeared to cue the subjects to the purpose of the research, possibly confounding or compromising the results.

4. All experimental studies conducted to date used what could be considered brief media exposure; the range of images presented was between 12 and 20, and the range of exposure time per image was 3 to 20 seconds. The average amount of total exposure time in these studies was about 10 minutes. Certainly, no data exist regarding what constitutes adequate exposure. Future studies might involve more images of the thin-ideal presented
for a longer duration of time to help ensure that the exposure might have a higher likelihood of eliciting effects in subjects.

5. Two research studies have examined the relationship between media exposure and internalization of the thin-ideal and both revealed no direct relationship between media exposure and internalization. Most theorists speculate that this relationship must exist and that repeated exposure to the thin-ideal leads to increased internalization, but studies to date have found no direct link.

6. Two studies that recruited women with eating disorders found a positive, moderate correlation between media exposure and eating pathology. One study found that women with eating disorders were impacted by exposure to the thin-ideal, but a comparison group of typical women was not.

7. How exposure to the thin-ideal differentially affects women with eating disorders, compared to women with no eating pathology, has not been clearly elucidated. Further, future research must randomly assign subjects to experimental and control conditions to help determine how the thin-ideal images might differentially affect women.
CHAPTER III
PURPOSE AND OBJECTIVES

The first objective of this research project was to assess whether exposure to the thin cultural-ideal female body form portrayed in the media adversely affects women's body satisfaction, self-esteem, and affect. Also of interest is how media exposure impacts internalization of the thin-ideal. Previous research investigations dealing with these objectives have found discrepant findings and, as a result, there is no concrete information on how the media affects women's perceptions of themselves. Past studies have also had questionable procedures that could be improved. This research investigation emphasized improved methodology: (a) random assignment of subjects to condition; (b) avoidance of cues to purpose of the study (to protect internal reliability); (c) high salience, validity of thin-ideal in the media; and (d) longer media exposure time.

For this first objective, it was hypothesized that college women who were in the thin-ideal media condition would endorse higher levels of body dissatisfaction, lower self-esteem, and increased negative affect compared to college women who viewed neutral images.

The second objective was to determine if women in the thin-ideal media condition would endorse higher levels of internalization of the thin-ideal stereotype than women in the neutral condition. There have been two previous investigations that have examined this second objective and the results revealed no direct relationship between media exposure and internalization of the thin-ideal. For this objective, it was hypothesized that
college women who viewed thin-ideal media images would be more likely to endorse internalizing the thin-ideal image than college women in the control group who viewed neutral images.

In summary, the two key research questions of this study were as follows:

1. In general do the improved research procedures used for exposing women to thin-ideal images (vs. neutral image exposure) in the present study affect: (a) level of body dissatisfaction, (b) (decrease) mood, or (c) (decrease) self-esteem?

2. To what degree do college women who have been exposed to the thin-ideal media condition endorse internalizing the thin-ideal body image compared to women in a neutral control condition?
CHAPTER IV

METHODOLOGY

Subjects

The subjects for this study consisted of 124 female students enrolled in introductory psychology and sociology courses at Utah State University (USU). Body image disturbances and dissatisfaction occur almost exclusively among females and are overrepresented among college students (Johnson & Conners, 1987). To increase the range of scores in the sample for body dissatisfaction, an additional 21 female college subjects who had a diagnosable eating disorder were recruited from clinical practices and self-help groups in the university community (e.g., USU Counseling Center). The final sample consisted of 150 college women; 5 subjects were excluded from this final sample due to failure to complete all of the required measures (4 control, and 1 experimental). Random assignment resulted in 74 subjects being assigned to the thin-ideal media condition and 71 subjects to the control condition.

The women were between the ages of 18 and 44, with a mean age of 21 years. The college women had from 12 to 16 years of education, with a mean of 14 years (sophomore) of education. The sample was 92.4% Caucasian, 2.8% Hispanic, .7% Asian, 0% African American, 1.4% Native American, and 2.8% international students. The majority of the participants were single (87.6%), 10.3% were married, and 2.1% were divorced. In terms of monthly income, 22.1% of the women reported under $100 a month, 55.9% earned between $100-$500, 17.2% earned between $500-$1,000, and 4.8%
reported over $1,000 per month. In terms of living arrangements, 26.9% reported living in a dorm room, 54.5% reported renting a home or apartment, 12.4% reported living with their parents, and 6.2% owned their own home or apartment. The high body dissatisfaction subjects with eating disorders were added to the sample and were diagnosed with DSM-IV (APA, 1994) anorexia nervosa (7 subjects) and bulimia nervosa (14 subjects).

Materials

Demographic Information Form

The demographic information form (see Appendix A) required subjects to provide various kinds of information regarding age, marital status, and ethnicity. These data were used for descriptive purposes to provide basic information for future readers interested in replicating the present investigation.

Experimental Condition—Media Binders

The "thin-ideal" media presentation consisted of 40 full-page photographs taken from the summer issues (1996) of three mass circulation magazines: Cosmopolitan, Vogue, and Glamour. These publications showcase contemporary female fashions and have a largely female readership, and the magazines continually secure top rankings in terms of sales for women's magazines. The use of commercial women's magazines provided optimal external validity.

Six eligibility criteria had to be met for photographs to be eligible for the
thin-ideal media condition: (a) full page ads; (b) ads must show at least 90% of the model’s body; (c) no other models are featured in the ad; (d) any printed material in the ad had to be 14 point or smaller fonts, or if there was large print, it could not impose on the model’s body; (e) the camera angle of the ad had to focus on the model and not another product (i.e., car, perfume bottle); and (f) the ad could not allude to a diet product or dieting.

Control Condition--Media Binders

In the no-model media control condition, subjects viewed binders containing 40 nonfashion pictures (e.g., advertisements not containing people), selected from the same issues of *Vogue*, *Cosmopolitan*, and *Glamour* magazines as the thin-ideal pictures were. Advertisements for food or weight loss diets were not included to avoid introducing stimuli that might reasonably be expected to precipitate concern about body dimensions in subjects. The majority of ads in the control condition featured cars, jewelry, make-up, and perfume.

The 40 photographs used in each media condition were cased in black, three-ring binders. Plastic sleeves individually housed each photograph. The binders in respective conditions contained the same 40 photographs in the identical sequence. The size of the photographs in the experimental and control conditions was identical (see Appendix B).

Consent Form

A consent form (see Appendix C) advised subjects that: (a) participation in the
study would take approximately one hour; (b) they would be asked to complete a demographic information form, The Role of Advertising Questionnaire (RAQ), and several mood and personality questionnaires; (c) all completed questionnaires would be kept in a confidential and secure place; (d) the study results would be used for research purposes only, and would report only group data; (e) their participation was voluntary and subjects were free to withdraw their consent at any point; (g) there are no known risks associated with participation; (h) the exact nature and purpose of the study would not be disclosed to them at this time due the nature of the research; and (i) they would be debriefed 2 weeks after data collection is completed.

Measures

**Body Dissatisfaction**

Subject’s satisfaction with their bodies was assessed with the nine-item body satisfaction subscale of the Eating Disorder Inventory, Second Edition (EDI-2; Garner, 1991). Items on the measure are presented in a 6-point, forced choice format (see Appendix D). Respondents rate whether each item applies "always," "usually," "often," "sometimes," "rarely," or "never." The most extreme eating disorder-like response earns a score of 3, the immediately adjacent response earns a score of 2, and the next response earns a 1. The three choices opposite to the most pathological response receive no score. Cronbach’s alpha for this scale was .91. The internal consistency reliability of this scale is .92. The reliability and validity of this scale have been well documented (Garner, 1991).
Negative Affect

The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) was used to assess mood states (see Appendix E). The POMS is a 65-item questionnaire with six mood subscales (tension, anger, fatigue, depression, vigor, and confusion). Each subscale has been reported to have high internal consistency, and research has supported the criterion, concurrent, and construct validity of the POMS (McNair et al., 1971). This instrument is widely used in research that requires a sensitive measure of small changes of mood fluctuations.

Self-Esteem

The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) was utilized to assess levels of self-esteem (see Appendix F). This measure consists of 10 items measuring global self-esteem. The RSE is the most widely used measure of self-esteem. Respondents are asked to rate the 10 items on a 4-point Likert-type scale from strongly agree to strongly disagree. Coefficient alphas have been reported ranging from .77 to .87. Test-retest reliability coefficients have been reported ranging from .73 to .85. The RSE has also received substantial support as a unidimensional or single-factor scale.

Thin-Ideal Endorsement

The Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ) was used to assess degree of internalization of the cultural value of thinness. The SATAQ is a 14-item Likert-scale self-report measure that reflects awareness of societal attitudes about thinness/attractiveness and internalization/acceptance of these societal beliefs (Heinberg
et al., 1995). The six-item Awareness scale has an alpha of .71 and the eight-item Internalization scale has a reliability of .88. This instrument is not commercially available and is contained in Appendix G.

**Distracter Measures**

The Role of Advertising Questionnaire (RAQ) was developed as a distracter instrument for the present study (see Appendix H). The instrument contains six items that ask several questions like "Do you prefer name brands over discount brands?"; "What clothing stores do you shop at most?" The purpose of having subjects complete the RAQ was to ensure that they were not cued to the primary purpose of the study. Completing this measure merely fulfilled subjects’ expectation (or beliefs) that the purpose of viewing the advertisements was to assess their opinions about advertising.

**Maximizing Attention to Advertisements**

To help maximize experimental conditions versus control effects it is important to make sure that subjects adequately attend to all important features of the media materials for a set period of time. The Media Response Questionnaire was developed specifically for this research investigation to maximize subjects’ attention to all advertisement material. This instrument consisted of 40 items that required the subjects to attend to each photograph in the media binder and answer the corresponding multiple choice or short answer question regarding their opinion of the ad.
Eating Pathology

The Anorexia Bulimia Inventory (ABI) was used as an accessory measure to assess the presence of eating disorder pathology (Stein, 1991; see Appendix I). The ABI is a 75-item self-report inventory that includes the following subscales: Binging, anorexia, parent conflict, anergia, depressed mood, anxiety, maladaptive cognitions, purging, and exercise. Subjects' summed scores on the anorexia, purging, and binging subscales represented the measure reflecting the number/severity of eating pathology symptoms. The ABI has adequate internal consistency and test-retest reliability. Cronbach’s alpha for ABI subscales ranged from .64 to .94 and test-retest reliability for the subscales ranged from .63 to .80. Preliminary studies indicate that the central subscales of the ABI inventory display adequate construct validity (Stein, 1991).

Procedures

This research investigation was presented to subjects as two unrelated studies. This representation of procedures as two studies was designed to help subjects remain blind to the exact purpose of the research. Subjects were told the "first" investigation was presented as a study on "The Role of Advertising," an examination of how advertisements influence what one is likely to purchase. The "second" investigation was depicted as a survey of student attitudes, opinions, and behaviors. Since the majority of subjects were from introductory psychology and sociology courses and could discuss the study with one another in classes, subjects were asked to agree in the consent form that they would not be fully debriefed about all procedures or the exact purposes of the study until after all
data collection was completed (see Consent Form). Instructions were orally presented to
the participants and these instructions were also on the top of each questionnaire.

Subjects were randomly assigned to either an experimental group (exposed to
magazine photos of thin fashion models) or a control group (neutral advertising images).
Equal numbers of subjects were randomly assigned to each group. The confidentiality of
the subjects was protected by assigning each participant an identification number and
only the participants’ identification numbers were written on each form. Cohorts of 10
subjects completed the experiment in a group session, five from the experimental and five
from the control group. Conference rooms were used for the procedures and participants
were seated in every other chair around a large table. Subjects in the experimental and
control conditions were given 30 minutes to view binders containing full-size pictures
from magazines. All subjects were told that the "first" investigation required them to
view each binder page for approximately 45 seconds and then answer the corresponding
question on the Media Response Questionnaire. As was noted, this instruction was
simply to help ensure that subjects attended to the pictures. Subjects in the experimental
condition viewed binders containing pictures of thin, ideal images of women. The
subjects in the control condition viewed binders filled with the same number of neutral
images. Immediately after viewing the photographs, subjects were instructed to complete
the Role of Advertising Questionnaire and the demographic information sheet. The "first"
investigation was completed in about 35 minutes. At this point, the examiner removed
the media binders, Media Response Questionnaire, and the RAQ after the 35 minutes had
elapsed.
Subjects were then instructed that the "second" investigation would now begin. Subjects were given a research questionnaire packet (i.e., SATAQ, POMS, ABI, RSE) and once again informed that the second investigation was being conducted to examine the attitudes and behaviors of college women. This "second" investigation required participants to answer all questions on a Scantron computer answer sheet and required approximately 20 minutes to complete. As the content of some scales (body dissatisfaction, eating disorders symptoms) may have revealed the purpose of the study, these were placed last in the questionnaire battery, rather than in a random order.

Following the completion of all instruments, subjects were able to discuss their experience with the examiner if they felt they could not wait until after the total data collection was complete. Two eating disorder subjects and two subjects from the normal sample discussed their reactions to the images immediately following the experiment.

Analysis

Data analyses for this project were conducted using several techniques. The first consisted of simple descriptive statistics (means and standard deviations) of the demographic variables, which were checked for normality of distribution. The primary analyses addressed each of the two research questions specified earlier in the Purpose and Objectives section of the dissertation. These were as follows.

Question 1. In general do the improved research procedures used for exposing women to thin-ideal images (vs. nonexposure) in the present study affect: (a) level of body dissatisfaction, (b) (decrease) mood, or (c) (decrease) self-esteem? To address this
research question, three separate post hoc univariate analyses of variance (ANOVA) were performed to examine mean differences in the media condition versus the control condition for body dissatisfaction, self-esteem, and mood.

As stated previously, it was expected that women in the thin-ideal media condition would score significantly higher in terms of body dissatisfaction, lowered self-esteem, and overall lowered affect compared to women in the control group.

**Question 2.** To what degree do college women who have been exposed to the thin-ideal media condition endorse internalizing the thin-ideal body image compared to women in a neutral control condition? A post hoc univariate analysis of variance was also performed to identify group differences in terms of internalization of the thin-ideal.

It was expected that women in the media exposure group who viewed the thin-ideal images would score as having significantly higher levels of internalization of the thin-ideal compared to women in the control condition.

### Additional Analyses

The data collected in this investigation contained information on several important variables that, although not directly related to the two main research questions presented earlier, should add additional information on the principles underlying the key questions of this research. Additional multifactorial analyses of variance were conducted to examine the relationship of eating pathology and media exposure.

The independent variables for this analysis consisted of categorical and continuous variables. In terms of media condition (effects of exposure of thin-ideal
images), dummy coding was used and subjects in the thin-ideal condition were coded 1 and subjects in the no-model condition were coded 0.
The analysis of data followed the format specified by the proposed research questions. However, prior to presenting the results relevant to each research question, group differences on the demographic information that could account for the results of the experiment were assessed. This examination includes additional analyses that were not associated with the original research questions, but are important to the overall findings of the study.

Preliminary Analyses

Table 3 displays the descriptive statistics for the media intervention condition and the control group on the demographic variables. Univariate analysis of variance results indicated that there were no differences between the groups on age or education. Also, Pearson’s chi-squared results indicated that there were no group differences in terms of monthly income, ethnicity, marital status, or living arrangements. These results suggest that the experimental group and the comparison group were not statistically different on any demographic variables. Thus, these variables do not likely account for the group differences that were found as a result of the experimental manipulation.

Internal Consistency of the Measures

The internal consistency reliability of the instruments utilized in the present study was calculated using Cronbach’s coefficient alpha. Coefficient alphas for each measure
Table 3

Group Differences on the Demographic Profile of Women

<table>
<thead>
<tr>
<th>Variable</th>
<th>Thin-ideal exposure condition (N = 74)</th>
<th>Neutral images condition (N = 71)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Age (years)</td>
<td>19.98</td>
<td>3.40</td>
<td>20.49</td>
</tr>
<tr>
<td>Education (years)</td>
<td>13.89</td>
<td>1.11</td>
<td>13.90</td>
</tr>
<tr>
<td>Monthly income (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $100</td>
<td>18.92</td>
<td></td>
<td>25.35</td>
</tr>
<tr>
<td>$100-$500</td>
<td>54.05</td>
<td></td>
<td>57.75</td>
</tr>
<tr>
<td>$501-$1,000</td>
<td>22.97</td>
<td></td>
<td>11.27</td>
</tr>
<tr>
<td>$1,001 and above</td>
<td>4.05</td>
<td></td>
<td>5.63</td>
</tr>
<tr>
<td>Ethnicity (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>94.59</td>
<td></td>
<td>90.14</td>
</tr>
<tr>
<td>African American</td>
<td>0.00</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Native American</td>
<td>0.00</td>
<td></td>
<td>2.82</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.35</td>
<td></td>
<td>4.23</td>
</tr>
<tr>
<td>Asian American</td>
<td>0.00</td>
<td></td>
<td>1.41</td>
</tr>
<tr>
<td>International</td>
<td>4.05</td>
<td></td>
<td>1.41</td>
</tr>
<tr>
<td>Marital status (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>87.84</td>
<td></td>
<td>87.32</td>
</tr>
<tr>
<td>Divorced</td>
<td>0.00</td>
<td></td>
<td>4.23</td>
</tr>
<tr>
<td>Married</td>
<td>12.16</td>
<td></td>
<td>8.45</td>
</tr>
<tr>
<td>Living arrangements (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dorm room</td>
<td>27.02</td>
<td></td>
<td>26.76</td>
</tr>
<tr>
<td>Renting house/apartment</td>
<td>50.00</td>
<td></td>
<td>59.15</td>
</tr>
<tr>
<td>Living with parents</td>
<td>16.22</td>
<td></td>
<td>8.45</td>
</tr>
<tr>
<td>Own house/apartment</td>
<td>6.76</td>
<td></td>
<td>5.63</td>
</tr>
</tbody>
</table>

are presented in Table 4. The coefficient alphas produced on the current study’s measures approximate those found on the standardization sample of each instrument.

Analyses of Research Questions

The analyses below followed the procedures specified in the research proposal for the current study. A Type I error rate of .05 was used for all of the statistical significance
Table 4

Internal Consistency

<table>
<thead>
<tr>
<th>Test/subtest</th>
<th>Coefficient alphas</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDI-2</td>
<td></td>
</tr>
<tr>
<td>Body-dissatisfaction</td>
<td>.901</td>
</tr>
<tr>
<td>RSE</td>
<td>.851</td>
</tr>
<tr>
<td>POMS</td>
<td></td>
</tr>
<tr>
<td>anger</td>
<td>.913</td>
</tr>
<tr>
<td>anxiety</td>
<td>.923</td>
</tr>
<tr>
<td>confusion</td>
<td>.863</td>
</tr>
<tr>
<td>depression</td>
<td>.951</td>
</tr>
<tr>
<td>fatigue</td>
<td>.934</td>
</tr>
<tr>
<td>vigor</td>
<td>.882</td>
</tr>
<tr>
<td>SATAQ</td>
<td>.843</td>
</tr>
</tbody>
</table>

Testing. Statistical significance tests and effect sizes were computed for all analyses. Effect sizes of .20 or less will be interpreted as "small," .21 to .59 as "moderate," and .60 and above will be considered "large" (Glass & Hopkins, 1984). The two main research questions that guided this current project will be discussed below, followed by additional analyses that add depth to the investigation.

Group Differences on Dependent Measures (Question 1)

Did exposure (nonexposure) to the thin-ideal mediation condition affect women’s:
(a) body dissatisfaction, (b) mood, or (c) self-esteem? To address the first research question, separate univariate analyses of variance (ANOVA) were conducted for each of
the dependent variables. The practical significance of the findings were examined by effect size estimates. The results will be presented for each of the dependent variables.

**Body Dissatisfaction**

The first one-way analysis of variance was conducted to assess the difference in body dissatisfaction scores on the Eating Disorder Inventory--Second Edition (EDI-2) for the thin-ideal media condition relative to the comparison condition. The mean score for the thin-ideal media condition was 12.97 with a standard deviation of 6.23. The comparison group had a mean score of 7.17 with a standard deviation of 3.89. A significant main effect was found in this analysis, \( F (1, 143) = 44.76, p < .0001 \). As Table 5 indicates, the results suggest that individuals exposed to the thin-ideal media condition reported significantly higher body dissatisfaction than women in the comparison condition who viewed neutral images. Table 6 contains the ANOVA results found for body dissatisfaction.

**Negative Mood States**

The second analysis examined the difference of negative mood scores on the Profile of Mood States (POMS) for each group condition. The POMS contains six mood subscales and one overall mood score. As Table 5 indicates, the overall mood mean score for the thin-ideal media condition was 54.45 with a standard deviation of 35.49. The comparison group had a mean score of 29.87 with a standard deviation of 25.44. There was also a significant group effect found in this analysis, \( F (1, 143) = 22.79, p < .0001 \).
Table 5

Group Differences for Body Dissatisfaction, Affect, and Self-Esteem for Women with ANOVA Results

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Thin-ideal exposure condition</th>
<th>Mean</th>
<th>SD</th>
<th>Neutral images condition</th>
<th>Mean</th>
<th>SD</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body dissatisfaction</td>
<td>12.97</td>
<td>6.23</td>
<td></td>
<td>7.17</td>
<td>3.89</td>
<td></td>
<td>1.49</td>
</tr>
<tr>
<td>Low self-esteem</td>
<td>21.68</td>
<td>5.80</td>
<td></td>
<td>17.83</td>
<td>5.26</td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>Overall negative affect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>anxiety</td>
<td>14.48</td>
<td>6.70</td>
<td></td>
<td>11.38</td>
<td>5.35</td>
<td></td>
<td>.58</td>
</tr>
<tr>
<td>depression</td>
<td>19.38</td>
<td>13.03</td>
<td></td>
<td>10.32</td>
<td>7.63</td>
<td></td>
<td>1.19</td>
</tr>
<tr>
<td>anger</td>
<td>11.84</td>
<td>8.11</td>
<td></td>
<td>7.00</td>
<td>7.56</td>
<td></td>
<td>.64</td>
</tr>
<tr>
<td>vigor</td>
<td>15.29</td>
<td>6.52</td>
<td></td>
<td>17.39</td>
<td>5.76</td>
<td></td>
<td>-.36</td>
</tr>
<tr>
<td>fatigue</td>
<td>12.52</td>
<td>5.93</td>
<td></td>
<td>9.35</td>
<td>5.17</td>
<td></td>
<td>.61</td>
</tr>
<tr>
<td>confusion</td>
<td>11.51</td>
<td>4.99</td>
<td></td>
<td>9.21</td>
<td>3.63</td>
<td></td>
<td>.63</td>
</tr>
</tbody>
</table>

Table 6

ANOVA Results for Body Dissatisfaction, Self-Esteem, and Affect

<table>
<thead>
<tr>
<th>Sources of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDI-2 (body dissatisfaction)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>1220.59</td>
<td>1</td>
<td>1220.59</td>
<td>44.76</td>
<td>.0001</td>
</tr>
<tr>
<td>Within groups</td>
<td>3899.92</td>
<td>143</td>
<td>27.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5120.51</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSE (self-esteem)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>535.61</td>
<td>1</td>
<td>535.61</td>
<td>17.42</td>
<td>.0001</td>
</tr>
<tr>
<td>Within groups</td>
<td>4396.19</td>
<td>143</td>
<td>30.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4931.79</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POMS (affect)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>21879.03</td>
<td>1</td>
<td>21879.03</td>
<td>22.79</td>
<td>.0001</td>
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<tr>
<td>Within groups</td>
<td>137244.14</td>
<td>143</td>
<td>959.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>159123.17</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results reveal that women in the thin-ideal condition reported significantly higher overall negative mood than women in the comparison group. Table 5 contains the means and standard deviations for the six mood subscales on the POMS. The ANOVA results for the overall mood score are presented in Table 6. The univariate analysis of variance revealed a statistically significant treatment effect for the subscales of the POMS (see Table 7): anxiety $F(1, 143) = 9.46, p < .001$; depression $F(1, 143) = 25.79, p < .001$; anger $F(1, 143) = 13.79, p < .0001$; vigor $F(1, 143) = 4.20, p < .05$; fatigue $F(1, 143) = 11.77, p < .0001$; and confusion $F(1, 143) = 10.00, p < .001$. These results indicate that after women viewed thin-ideal images, they experienced more anger, anxiety, confusion, depression, fatigue, and less vigor than women who viewed neutral images.

**Self Esteem**

The final analysis examined the difference in self-esteem scores on the Rosenberg Self-Esteem Scale (RSE) for each experimental condition. As Table 5 indicates, the mean score for the thin-ideal media group was 21.68 with a standard deviation of 5.80. The mean score for the control group was 17.83 with a standard deviation of 5.26. A significant group effect was found in this analysis, $F(1, 143) = 17.42, p < .0001$. This finding indicates that after exposure to the thin-ideal media condition, women scored lower on self-esteem than women in the comparison group who viewed neutral images.

Standardized mean difference effect sizes were also computed to assess the practical significance for the findings for each dependent variable. The effect sizes were computed by subtracting the mean of the neutral image group from the mean of the
Table 7

ANOVA Results for Subscales of the POMS

<table>
<thead>
<tr>
<th>Sources of variation</th>
<th>SS</th>
<th>df</th>
<th>MSF</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anger</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>848.06</td>
<td>1</td>
<td>848.06</td>
<td>13.79 .0001</td>
</tr>
<tr>
<td>Within groups</td>
<td>8796.05</td>
<td>143</td>
<td>61.51</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9644.11</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>349.61</td>
<td>1</td>
<td>349.61</td>
<td>9.46 .001</td>
</tr>
<tr>
<td>Within groups</td>
<td>5281.22</td>
<td>143</td>
<td>36.93</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5630.83</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Confusion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>1220.59</td>
<td>1</td>
<td>1220.59</td>
<td>10.00 .001</td>
</tr>
<tr>
<td>Within groups</td>
<td>27.27</td>
<td>143</td>
<td>3899.92</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5120.51</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>2970.60</td>
<td>1</td>
<td>2970.60</td>
<td>25.79 .001</td>
</tr>
<tr>
<td>Within groups</td>
<td>16468.95</td>
<td>143</td>
<td>115.17</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>19439.56</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fatigue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>365.25</td>
<td>1</td>
<td>365.25</td>
<td>11.77 .0001</td>
</tr>
<tr>
<td>Within groups</td>
<td>4438.64</td>
<td>143</td>
<td>31.04</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4803.89</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vigor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>159.35</td>
<td>1</td>
<td>159.35</td>
<td>4.20 .05</td>
</tr>
<tr>
<td>Within groups</td>
<td>5430.42</td>
<td>143</td>
<td>37.97</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5589.77</td>
<td>144</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

thin-ideal group and then dividing by the standard deviation of the neutral image group.

The effect sizes are presented in Table 5; the thin-ideal condition produced large
standardized mean difference effect sizes of 1.49, 1.19, and .97 for body dissatisfaction,
depression, and negative affect, respectively. Moderate standardized mean difference effect sizes were also found for self-esteem, anger, confusion, fatigue, and anxiety.

**Group Differences on Internalization (Question 2)**

To what degree do college women who have been exposed to the thin-ideal media condition endorse internalizing the thin-ideal body image compared to women in a neutral control condition? To address the second research question, an ANOVA was conducted to determine if group differences existed on the variable of internalization of the thin-ideal. The practical significance of the finding was examined by effect size estimates. Univariate analysis revealed that scores on the Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ) differed significantly ($F = 4.10, p \leq .04$) across the groups (see Table 9). As Table 8 indicates, the mean of the thin-ideal media group was 35.97 with a standard deviation of 9.51 and the mean of the control group was 39.01 with a standard deviation of 8.51. It was hypothesized that women in the thin-ideal condition would have statistically higher scores on internalization of thin-ideal than women in the control group; however, the results illustrate that women in the control group had significantly higher scores on the SATAQ. The effect size was - .36 for internalization, which indicates a moderate, negative relationship.

**Additional Analyses**

The following analyses of the data, although not specified as objectives of the
Table 8

Group Differences for Internalization

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Thin-ideal exposure condition</th>
<th>Neutral images condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Internalization</td>
<td>35.97</td>
<td>9.51</td>
</tr>
</tbody>
</table>

Table 9

ANOVA Results for the SATAQ

<table>
<thead>
<tr>
<th>Sources of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>335.11</td>
<td>1</td>
<td>335.11</td>
<td>.410</td>
<td>.05</td>
</tr>
<tr>
<td>Within groups</td>
<td>11674.93</td>
<td>143</td>
<td>81.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12010.04</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This research project included 21 women who were diagnosed with an eating disorder and were in treatment at the time of data collection. Due to the limited number of clinical subjects, the results should be viewed cautiously. However, the results are valuable in understanding how thin-ideal images impact women with eating disorders.
One area of interest was to determine whether there was an interaction between diagnosis and experimental condition on each of the outcome measures. A multifactorial ANOVA procedure was utilized. The total scores on each of the outcome measures (EDI-2, POMS, RSE) were used as dependent variables, while group assignment and the presence or absence of an eating disorder (independent variables) were the factors that were examined. For the examined variables, only one significant interaction was found for body dissatisfaction, $F(1, 141) = 3.51, p < .06$. Table 10 presents the sources of variation for body dissatisfaction, self-esteem, and affect. As Figure 1 illustrates, the results reveal that relative to all other subgroups of subjects, the women in the clinical sample with eating disorder who were exposed to the thin-ideal media condition, subsequently reported significantly greater body dissatisfaction.

Group Differences in the Clinical Sample

A second area of interest was to examine group differences within the clinical sample. Separate one-way analyses of variance (ANOVA) were conducted for each of the dependent variables to determine group differences with the clinical sample. The first ANOVA was conducted to assess the difference in body dissatisfaction scores on the EDI-2 for the media condition and the comparison condition. As Table 11 indicates, the mean score for the thin-ideal media condition was 20.10 with a standard deviation of 4.86. The comparison group had a mean score of 10.90 with a standard deviation of
Table 10

Interaction Between Diagnosis and Group Condition for Body Dissatisfaction, Self-Esteem, and Affect

<table>
<thead>
<tr>
<th>Sources of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body dissatisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>3274.73</td>
<td>141</td>
<td>23.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis</td>
<td>717.15</td>
<td>1</td>
<td>717.15</td>
<td>30.88</td>
<td>.000</td>
</tr>
<tr>
<td>Group condition</td>
<td>892.60</td>
<td>1</td>
<td>892.60</td>
<td>38.43</td>
<td>.000</td>
</tr>
<tr>
<td>Diagnosis by group condition</td>
<td>81.57</td>
<td>1</td>
<td>81.57</td>
<td>3.51</td>
<td>.06</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>4154.73</td>
<td>141</td>
<td>29.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis</td>
<td>280.33</td>
<td>1</td>
<td>280.33</td>
<td>9.51</td>
<td>.002</td>
</tr>
<tr>
<td>Group condition</td>
<td>414.90</td>
<td>1</td>
<td>414.90</td>
<td>14.08</td>
<td>.000</td>
</tr>
<tr>
<td>Diagnosis by group condition</td>
<td>50.54</td>
<td>1</td>
<td>50.54</td>
<td>1.72</td>
<td>.192</td>
</tr>
<tr>
<td>Affect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>128104.52</td>
<td>141</td>
<td>908.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis</td>
<td>12951.59</td>
<td>1</td>
<td>12951.59</td>
<td>14.26</td>
<td>.000</td>
</tr>
<tr>
<td>Group condition</td>
<td>7691.56</td>
<td>1</td>
<td>7691.56</td>
<td>8.47</td>
<td>.004</td>
</tr>
<tr>
<td>Diagnosis by group condition</td>
<td>140.37</td>
<td>1</td>
<td>140.37</td>
<td>.16</td>
<td>.695</td>
</tr>
</tbody>
</table>

4.25. A significant group effect was found in this analysis, $F(1, 19) = 21.34$, $p < .0001$.

The second analysis examined the difference of negative mood scores on the
POMS for women in the clinical sample for each group condition. As Table 11 indicates, for overall mood, the mean score for the thin-ideal media condition was 74.10 with a standard deviation of 43.06. The comparison group had a mean score of 56.18 with a standard deviation of 22.69. There was no significant group effect found in this analysis. However, Table 11 contains the means and standard deviations for the six mood subscales on the POMS. The univariate analysis of variance revealed only one statistically significant treatment effect for the subscales of the POMS, depression, $F(1, 19) = 6.40, p < .02$. These results indicate that after women with eating disorders viewed thin-ideal images, they endorsed more symptoms of depression than women with eating disorders in the comparison condition.

The final analysis examined the difference in self-esteem scores on the RSE for the clinical sample in each group condition. As Table 11 indicates, the mean score for the thin-ideal media group was 21.40 with a standard deviation of 5.78. The mean score for the control group was 19.91 with a standard deviation of 4.39. A significant group effect was found in this analysis, $F(1, 19) = 8.50, p < .009$. This finding indicates that after exposure to the thin-ideal media condition, women with eating disorders scored lower on self-esteem than women with eating disorders in the comparison group who viewed neutral images.

Standardized mean difference effect sizes were calculated and are presented in Table 11. An extremely large effect size of 2.12 was found for depression. Overall negative affect and anxiety also had moderate effect sizes. One interesting finding was for fatigue that had an effect size of -.46.
Table 11

Group Differences for Body Dissatisfaction, Affect, and Self-Esteem for the Clinical Sample, with ANOVA Results

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Thin-ideal exposure condition (N = 10)</th>
<th>Neutral images condition (N = 11)</th>
<th>Sig F (1, 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Body dissatisfaction</td>
<td>20.10</td>
<td>4.86</td>
<td>10.90</td>
</tr>
<tr>
<td>Low self-esteem</td>
<td>21.40</td>
<td>5.78</td>
<td>19.91</td>
</tr>
<tr>
<td>Overall negative affect</td>
<td>74.10</td>
<td>43.06</td>
<td>56.18</td>
</tr>
<tr>
<td>Anxiety</td>
<td>19.10</td>
<td>7.71</td>
<td>16.64</td>
</tr>
<tr>
<td>Depression</td>
<td>26.30</td>
<td>14.52</td>
<td>14.36</td>
</tr>
<tr>
<td>Anger</td>
<td>14.80</td>
<td>10.25</td>
<td>13.73</td>
</tr>
<tr>
<td>Vigor</td>
<td>13.00</td>
<td>6.31</td>
<td>15.64</td>
</tr>
<tr>
<td>Fatigue</td>
<td>13.20</td>
<td>6.44</td>
<td>14.55</td>
</tr>
<tr>
<td>Confusion</td>
<td>13.70</td>
<td>5.61</td>
<td>12.55</td>
</tr>
</tbody>
</table>

**p < .01. *** p < .001. **** p < .0001.
CHAPTER V
DISCUSSION

Many theorists strongly believe that our culture’s thin-ideal body image that is portrayed in the media has been a critical contributor to the rise of body dissatisfaction and eating disorders over the last two decades (Garner et al., 1980; Hamilton & Waller, 1993; Stice & Shaw, 1994). Sociocultural researchers have collected a plenitude of indirect evidence linking the “thinning” thin-ideal and the rise of diet ads to the increases in body dissatisfaction and eating pathology, but only a limited number of studies have experimentally assessed this relationship. Unfortunately, these studies have produced inconsistent findings. The present study offered improved methodology for assessing whether exposure to thin-ideal images portrayed in the media impacts women’s self-evaluations and satisfaction with their bodies. This study also examined if exposure to the thin-ideal images resulted in women having higher levels of endorsement of the thin-ideal body image.

In this chapter, findings for each research question of the present study are discussed. Furthermore, supplementary data examining the clinical sample are also addressed. Finally, limitations of the present study are discussed as are implications for future research.

Relationship Between Exposure and Women’s Self-Evaluations

Body dissatisfaction, mood, and self-esteem were the three factors examined in
relation to women’s self-evaluations after viewing thin-ideal images. As hypothesized, there was a significant main effect found for body dissatisfaction as measured by the EDI-2. These results are consistent with earlier findings of Stice and Shaw (1994). In their study, subjects exposed to thin-ideal images were less satisfied with their bodies ($ES = -0.13$), than subjects in the control condition. These findings also converge with a similar study by Stice et al. (1994), who found a significant correlation between consumption of media containing thin-ideal images and body dissatisfaction. The current results were also consistent with those of Irving (1990), who found that exposure to slides of thin models led to decreased body esteem. A recent study by Harrison and Cantor (1997) found that women who frequently viewed popular women’s magazines reported more dissatisfaction with their bodies. Their study found the relationship was not as strong between television viewing of shows featuring thin models and body dissatisfaction as it was with printed media.

Contrary to the studies reported above, one earlier study by Cash et al. (1983) found that women felt more satisfied with their bodies after viewing thin media images. One important difference between their study and the present investigation was that their images were selected based on “attractiveness,” rather than thinness per se (though the two constructs are correlated). Subjects in the Cash et al. study may not have reported heightened body dissatisfaction after exposure to such “attractive” women. One other factor that may have affected this earlier study by Cash et al. was the year it was conducted. In the early 1980s, media images were not as slender as the ideals found in women’s magazines published in the 1990s. As a result, the images in the Cash et al. study may not have elicited feelings of body dissatisfaction among women observers.
The results of the present study, along with past research, allow for greater confidence to be placed on the relationship between thin-ideal images and body dissatisfaction. These results indicated that brief exposure to thin images produced heightened levels of body dissatisfaction; however, the implications of these findings are presently not known. The negative impact of exposure to the thin-ideal on women’s body satisfaction and the relation between body dissatisfaction and eating pathology suggests a mechanism of action. It may be that exposure to thin-ideal images produces body dissatisfaction, which in turn promotes eating disordered behavior. Perhaps body dissatisfaction leads to restrained eating, which has been linked to anorexia and also the onset of binge eating and bulimia (Polivy & Herman, 1985).

Negative Mood States

As hypothesized, a significant main effect was found for overall negative affect as measured by the POMS. This finding indicates that after being exposed to the thin-ideal images, women in the experimental group reported increased negative mood states compared to women who viewed neutral images. It was also found that all six of the mood subscales of the POMS revealed statistically significant differences between the two conditions. The majority of these findings demonstrate a large experimental effect in this study. Women who viewed the thin-ideal images experienced more anger, anxiety, confusion, fatigue, and less vigor compared to women who viewed neutral images (see Table 4).

Several findings of this investigation were similar to the results of a previous study by Stice and Shaw (1994) that examined the relationship between media exposure
and negative affect. Effect sizes from their investigation included: anxiety (.04), confidence (-.43), depression (.19), guilt (.55), happy (-.32), shame (.37), and stressed (.29). Stice and Shaw (1994) only found a slight effect for depression and no effect for anxiety, whereas the current investigation found large effects for both (1.19 and .58, respectively). Two components of affect not covered by earlier investigations were fatigue and vigor. The current results may demonstrate how women exposed repeatedly to thin images feel mentally and physically unable to meet this ideal and, hence, could resort to food restriction and purging as a way to control their bodies instead of exercise or meal planning that appear to require more energy and planning with less returns. Another important finding is the large effect found for anger. This finding possibly demonstrates how women realize the large discrepancy between their body and the body of a thin-ideal, which creates feelings of frustration or anger that could be directed at themselves. This feeling of anger may then lead to restricting and binging to control these feelings.

The current results concerning the effects of exposure to the thin-ideal on negative affect, in conjunction with the research indicating that bulimics binge and anorexics restrict in response to negative affect, suggest one possible mechanism of action for the adverse effects of the media portrayed thin-ideal. Specifically, it may be that exposure to thin-ideal body images results in negative mood, which could serve to trigger binge eating or restricting in predisposed individuals.

Self-Esteem

As hypothesized, there was a main effect found for self-esteem as measured by the
RSE. The findings indicated that women exposed to the thin-ideal images reported lower self-esteem compared to women in the control group. This finding is consistent with the earlier work of Irving (1990); this author found that subjects exposed to thin images reported lower levels of self-esteem after viewing thin images. Irving's (1990) study revealed some findings that contradicted his hypothesis that women with increased symptomatology would exhibit lower self-esteem after exposure to thin images. His study found that eating disorder symptom level did not predict self-esteem scores; only exposure to the thin-ideal images predicted lowered self-esteem. The present investigation found that women in the clinical group exhibited lower self-esteem scores than women with eating disorders in the control condition. The Irving (1990) study is the only study besides the current investigation to examine the relationship between media exposure, eating pathology, and self-esteem. This research suggests that exposure to thin images results in lower levels of self-esteem among normal and eating disordered women. Future research is needed to help explain the relationship between low self-esteem and eating disorder symptomatology.

Relationship Between Exposure and Internalization

Contrary to predictions, the results indicated that women in the neutral image group had significantly higher scores on the SATAQ than women in thin-ideal condition. The results suggest that women in the control group endorsed higher internalization of the thin-ideal than women exposed to the thin-ideal images. Although this was an unexpected finding, there are several possible explanations that may bring light to this
finding. One explanation is that women in the experimental group were reluctant to endorse that they admired this thin-ideal body image given the majority felt dissatisfied with their bodies, exhibited negative mood states, and felt less self-worth after exposure to this image. Hence, women may be reluctant to willingly acknowledge wanting to aspire to look like a thin-ideal image when it creates personal distress. This explanation is consistent with findings that illustrate that women are apprehensive to admit they feel a large discrepancy between their actual self and their ideal self which causes them marked body dissatisfaction. Women in the control group may have been more willing to endorse aspiring to the thin-ideal since they did not experience the immediate negative self-appraisals after exposure to the images.

A second possible explanation for this finding is that women in the thin-ideal group made the realization that they did not want to look like these particular thin-ideal images. Many of the images presented women with emaciated frames, pale complexions, and black circles under their eyes. Women in the experimental group may have been less likely to endorse wanting to look like these images even though these images may have triggered negative feelings from exposure to thin-ideals in the past.

Two other research investigations have also found similar results for internalization. Stice and others’ (1994) results indicated that the data did not support the predicted effect from media exposure to internalization of the thin-ideal. They found the effects of internalization of the thin ideal on eating pathology are primarily mediated through body dissatisfaction. Another study by Stice and Shaw (1994) also found that exposure to the thin-ideal did not produce differences in terms of internalization. In their
study, women in the control group also had higher scores for endorsement of the thin-ideal than women exposed to thin-ideal images. It may be that correlational studies, rather than experiments, will have to be relied upon to demonstrate the relation between media use and internalization of the thin-ideal stereotype.

Clinical Populations and Exposure

The clinical sample consisted of 21 women who were in treatment for an eating disorder. The discussion of these findings should be viewed cautiously due to the limited sample size. The results indicate that there was an interaction between diagnosis and experimental condition for body dissatisfaction. This finding reveals that women with eating disorders who were exposed to thin-ideal images reported greater body dissatisfaction compared to other subgroups of subjects. This suggests that exposure to thin-ideal media may elicit pronounced avowals of body dissatisfaction, whereas exposure to neutral advertisements does not.

This project also examined group differences within the clinical sample. The results revealed that women with eating disorders exhibited more depression, body dissatisfaction, and a lower self-esteem than women with eating disorders in the neutral condition. Only two previous studies have also examined the relationship between women with eating disorders and media exposure. These studies only examined body-size estimation and found that women with eating disorders were likely to overestimate the size of their body after exposure compared to normal women (Hamilton & Waller, 1993; Waller et al., 1992). Future studies with eating disorder subjects would be beneficial for this field of research.
Limitations of the Current Investigation

While the results show a clear pattern of effects of photographs used in the print media, these findings should be treated as preliminary. The generalizability of these findings is still to be established with other media (e.g., television, movies) and in other groups of women. There are several limitations of the present study that should be presented. First, this project relied on self-report data. More confidence could be placed on the findings if behavioral observations or multiple reporter data had been used. Second, although research suggests that female college students constitute a high risk group for eating pathology, generalization would have been improved if a randomly selected community sample had been employed.

Another limitation of this study was that all data were posttest only. A pre-/posttest design would be more beneficial in the future to ensure that the experimental condition was not influencing subjects’ reports of eating pathology and internalization. It would be better to administer the pretest measures at the beginning of the semester and then collect data again at the end of the semester. It would also be beneficial to collect qualitative data in regard to women’s individual responses to viewing thin-ideal images immediately after the experiment. The ideal design for examining the relationship between media and development of eating disorders would be longitudinal, beginning with younger participants before they develop eating disorders and tracking their attitudinal and behavioral development and media use habits over several years.
A final limitation of the current investigation was that there were no inferential tests of the proposed mediational processes. However, it was not possible to formally examine mediation as it would be unethical to attempt to experimentally induce eating disorder symptomatology.

Implications for Prevention and Directions for Future Research

It should not be surprising that media images have an influence upon their audience. However, the present findings suggest that the photographic representation of women in mass circulation fashion magazines can have a powerful influence on women's self-appraisals. The broader social implications of this research become apparent when one considers the current debate over the appropriateness of ultrathin fashion models (e.g., Kate Moss). It is clear that these images send a dangerous message. Exposure to the media-portrayed thin-ideal was shown to be related to body dissatisfaction, negative affect, and low self-esteem and suggests that women may directly model disordered eating behavior presented in the media (e.g., fasting or purging). Additionally, the focus on dieting in the media may promote dietary restraint, which appears to increase the risks for binge eating (Polivy & Herman, 1985).

Media presentation of "idealized" women cannot be the only factor responsible for women's negative self-appraisals. However, this effect is substantial enough to suggest that media presentation of idealized women's bodies may have practical relevance. In terms of a clinical application, it might be critical to advise female anorexics and bulimics to avoid publications that portray women as thin-ideal images.
Second, women’s responsiveness to such images might be addressed through cognitive-behavioral therapy. Third, school-based prevention efforts could be aimed at reducing the internalization of the thin-ideal stereotype, as well as promoting body satisfaction. These programs should also emphasize the incongruence between biology and the female body and the thin-ideal. Negative psychological and physiological risks associated with the pursuit of this body type need to be underscored.

Today’s women can be helped by using media to their advantage, encouraging media representatives to adopt role models reflecting a broader spectrum of beauty than that which has traditionally been portrayed. Several campaigns (Special K, Just My Size) suggest that some media representatives are trying to portray more realistic images.

Future studies might also examine variables that moderate the effects of sociocultural pressures. Although most women are exposed to the media-portrayed thin-ideal, only a small proportion develop eating disorders. Such moderators may include biological, cognitive, and personality factors. Longitudinal investigations would provide compelling support for these relationships. For example, a woman biologically predisposed toward a heavier body weight may resort to extreme dieting or purging to control her weight. Furthermore, women with low self-esteem or identity deficits may be more likely to internalize sociocultural standards.
REFERENCES


APPENDICES
Appendix A
Demographic Information Form

DO NOT PUT YOUR NAME ON THIS FORM

AGE: _____

STUDENT STATUS:  
____ Freshman  
____ Sophomore  
____ Junior  
____ Senior  
____ Graduate  
____ Nonstudent

LIVING ARRANGEMENTS:  
____ Dorm room  
____ Renting house/apartment  
____ Living with parents  
____ Own house/apartment

ETHNICITY:  
____ Caucasian  
____ African American  
____ Native American  
____ Hispanic  
____ Asian American  
____ International (Country: _____)  
____ Other (____________)

MARITAL STATUS:
____ Single  
____ Divorced  
____ Married

CHILDREN:
____ yes  
____ no

PERSONAL MONTHLY INCOME:  
____ Under $100  
____ $101-$500  
____ $501-$1,000  
____ $1,001-$5,000  
____ $5,001 or above

HOBBIES: ________________  
_____________
Appendix B

Media Response Questionnaire

Page #1: Do you feel women ages 19 to 39 would be likely to buy this product? 

Page #2: Would this ad persuade you to buy this product? 

Page #3: What do you feel the advertiser is trying to portray by this ad? 

Page #4: Do you like this ad? Rate this ad on a scale of 1 to 10 on likability.

1 2 3 4 5 6 7 8 9 10
I dislike the ad----------------------------- I like the ad.

Page #5: Which audience of women do you believe would likely buy this product?

1. 14-19 year olds 2. 20-35 year olds 3. 35-50 year olds 4. 51 and above

Page #6: When you turned the page to this ad, what did you first notice?

Page #7: If you were looking through a magazine do you think this ad would catch your attention?

Page #8: Do you have any suggestions on how to improve this ad?

Page #9: What do you feel the advertiser is trying to portray by this ad? 

Page #10: Would this ad persuade you to buy this product?

Page #11: If you were looking through a magazine do you think this ad would catch your attention?

Page #12: Which audience of women do you believe would likely buy this product?

1. 14-19 year olds 2. 20-35 year olds 3. 35-50 year olds 4. 51 and above
Page #13: Do you like this ad? Rate this ad on a scale of 1 to 10 on likability.

I dislike the ad----------------------------------- I like the ad.

Page #14: Do you feel women ages 19 to 39 would be likely to buy this product?

Page #15: When you turned the page to this ad, what did you first notice?

Page #16: Do you have any suggestions on how to improve this ad?

Page #17: Would this ad persuade you to buy this product?

Page #18: If you were looking through a magazine do you think this ad would catch your attention?

Page #19: Which audience of women do you believe would likely buy this product?
1. 14-19 year olds
2. 20-35 year olds
3. 35-50 year olds
4. 51 and above

Page #20: When you turned the page to this ad, what did you first notice?

Page #21: Do you like this ad? Rate this ad on a scale of 1 to 10 on likability.

I dislike the ad----------------------------------- I like the ad.

Page #22: Do you have any suggestions on how to improve this ad?

Page #23: What do you feel the advertiser is trying to portray by this ad?

Page #24: Do you feel women ages 19 to 39 would be likely to buy this product?

Page #25: Which audience of women do you believe would likely buy this product?
1. 14-19 year olds
2. 20-35 year olds
3. 35-50 year olds
4. 51 and above
Page #26: What do you feel the advertizer is trying to portray by this ad?

Page #27: If you were looking through a magazine do you think this ad would catch your attention?

Page #28: When you turned the page to this ad, what did you first notice?

Page #29: Do you feel women ages 19 to 39 would be likely to buy this product?

Page #30: Do you like this ad? Rate this ad on a scale of 1 to 10 on likability.

Page #31: Would this ad persuade you to buy this product?

Page #32: Do you have any suggestions on how to improve this ad?

Page #33: Do you feel women ages 19 to 39 would be likely to buy this product?

Page #34: If you were looking through a magazine do you think this ad would catch your attention?

Page #35: When you turned the page to this ad, what did you first notice?

Page #36: Would this ad persuade you to buy this product?

Page #37: What do you feel the advertizer is trying to portray by this ad?

Page #38: Which audience of women do you believe would likely buy this product?

1. 14-19 year olds
2. 20-35 year olds
3. 35-50 year olds
4. 51 and above

Page #39: Do you like this ad? Rate this ad on a scale of 1 to 10 on likability.
Page #40: Do you have any suggestions on how to improve this ad?
Appendix C

Permission Statement

As a participant in the study being conducted by Nicole Hawkins, M.S. and David M. Stein, Ph.D. of Utah State University, I understand that:

The purpose of the study is to examine the role of the media in impacting attitudes. I understand that the full details regarding the exact purpose of procedures will not be disclosed to me at this time, but will be disclosed at the completion of the research. No procedures associated with participation are expected to cause distress or discomfort. While I may not benefit personally from participation in this study, it is expected that the results will help social scientists.

I understand that participation in this study will involve two different experiments. The first experiment which involves viewing popular magazine photos and filling out “The Role of Advertising Questionnaire” will take approximately 30 minutes. The second experiment involves examining attitudes and behaviors and will involve completing a demographic face sheet and a few questionnaires and will take approximately 45 minutes.

I'm aware that the researchers are not interested in the responses or data of individual subjects, but that of groups of people, and results from questionnaires will report only group data and will be used for research purposes only. Thus any information about my individual responses will be lost when data are analyzed as groups.

Further, I understand that there are no known risks associated with participating in the study, and that my involvement is voluntary. I am free to withdraw my consent any time during the study period without consequence. If I'm receiving extra credit for a university course, and withdraw, I will earn an amount of credit proportionate to the amount of time earned in the experiment. I understand that codes will be used in place of identifying information (e.g., name) to label all forms and questionnaires to protect my confidentiality. Additionally, I understand that all research materials will be kept locked in a safe place to further ensure my confidentiality, and will be destroyed 6 months after research is completed.

I understand that subjects are invited to inquire about study procedures at any time, and that results of the study will be available in about 6 months, from Dr. Stein or Nicole Hawkins, Utah State University.

Name                  Date

Signature

P.I. David Stein, Ph.D. Date

Any questions or concerns, please contact Nicole Hawkins, M.S. at 753-1740
David M. Stein, Ph.D. at 797-3274
Appendix D

Body Dissatisfaction Subscale

Answer each question on how you feel about your body.
1 = Never
2 = Rarely
3 = Sometimes
4 = Often
5 = Usually
6 = Always

1. I think that my stomach is too big.
2. I think that my thighs are too large.
3. I think that my stomach is just the right size.
4. I feel satisfied with the shape of my body.
5. I like the shape of my buttocks.
6. I think my hips are too big.
7. I think that my thighs are just the right size.
8. I think my buttocks are too large.
9. I think my hips are just the right size.
Appendix E

Profiles of Mood States

Below is a list of words that describe feelings people have. Please read each one carefully. Then fill in ONE circle under the answer to the right which best describes HOW YOU HAVE BEEN FEELING DURING THE PAST WEEK INCLUDING TODAY. The numbers refer to these phrases.

0= Not at all  
1 = A little  
2= Moderately  
3= Quite a bit  
4= Extremely

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<tbody>
<tr>
<td>1.</td>
<td>Friendly</td>
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<td>2.</td>
<td>Tense</td>
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<td>3.</td>
<td>Angry</td>
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<td>4.</td>
<td>Worn out</td>
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<td>5.</td>
<td>Unhappy</td>
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<td>7.</td>
<td>Lively</td>
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<td>8.</td>
<td>Confused</td>
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<td>9.</td>
<td>Sorry for things done</td>
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<td>10.</td>
<td>Shaky</td>
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<td>11.</td>
<td>Listless</td>
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<td>12.</td>
<td>Peeved</td>
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<td>Active</td>
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<td>16.</td>
<td>On edge</td>
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<td>17.</td>
<td>Grouchy</td>
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<td>18.</td>
<td>Blue</td>
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<td>19.</td>
<td>Energetic</td>
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<td>20.</td>
<td>Panicky</td>
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<td>21.</td>
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<td>22.</td>
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<td>23.</td>
<td>Unworthy</td>
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<td>24.</td>
<td>Spiteful</td>
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<td>Sympathetic</td>
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<td>Alert</td>
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<td>53.</td>
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<td>55.</td>
<td>Trusting</td>
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<td>57.</td>
<td>Bad-tempered</td>
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<td>59.</td>
<td>Forgetful</td>
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<td>Terrified</td>
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<td>63.</td>
<td>Vigorous</td>
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<td>65.</td>
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Appendix F

Rosenberg Self-Esteem Index

On the following questions please mark one of the answers as most closely representing your own feeling. Remember, there are no right or wrong answers, only what you think.

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

   Strongly Agree _____ Agree _____ Disagree _____

   Strongly Disagree _____

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

   Strongly Agree _____ Agree _____ Disagree _____

   Strongly Disagree _____

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

   Strongly Agree _____ Agree _____ Disagree _____

   Strongly Disagree _____

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

   Strongly Agree _____ Agree _____ Disagree _____

   Strongly Disagree _____

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

   Strongly Agree _____ Agree _____ Disagree _____

   Strongly Disagree _____

6. I take a positive attitude toward myself.

   Strongly Agree _____ Agree _____ Disagree _____

   Strongly Disagree _____
7. On the whole, I am satisfied with myself.

Strongly
Agree _____ Agree _____ Disagree _____

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

Strongly
Agree _____ Agree _____ Disagree _____

9. I certainly feel useless at times.

Strongly
Agree _____ Agree _____ Disagree _____

10. At times, I think I am no good at all.

Strongly
Agree _____ Agree _____ Disagree _____
Appendix G

Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ)

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

1) Women who appear in TV shows and movies project the type of appearance that I see as my goal.

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2) I believe that clothes look better on thin models.

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3) Music videos that show thin women make me wish that I were thin.

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4) I do not wish to look like the models in magazines.

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5) I tend to compare my body to people in magazines and on TV.

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6) In our society, fat people are not regarded as unattractive.

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7) Photographs of thin women make me wish that I were thin.

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8) Attractiveness is very important if you want to get ahead in our culture.

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9) It's important for people to work hard on their figures/physiques if they want to succeed in today's culture.

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10) Most people do not believe that the thinner you are, the better you look.

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11). People think that the thinner you are, the better you look in clothes.

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12). In today’s society, it’s not important to always look attractive.

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13). I wish I looked like a swimsuit model.

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14). I often read magazines like *Cosmopolitan, Vogue, and Glamour* and compare my appearance to the models.

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15). I believe that society values the standard of “thinness.”

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16). Although I value the standard of “thinness,” I have given up trying to achieve it.

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Appendix H

Role of Advertising Questionnaire

1). Do you purchase name brand clothing rather than discount brands? 

2). Do you feel that name brand clothing is of superior quality compared to discount brands? 

3). What clothing stores do you shop at the most? 

4). Do you ever buy clothing from mail order catalogs like J.Crew, Speigel, Newport News? If yes, which ones 

5). On average, how much money do you spend on clothing each month? 

6). What magazines do you subscribe to or read at least monthly?
Appendix I

Anorexia Bulimia Inventory

HEALTH AND DEVELOPMENT QUESTIONNAIRE

Rate each of the statements below on a scale from 1 to 4 as they describe how you feel, act, or believe at present. The rating should identify whether or not the statement generally describes you at the present time. Mark all of your answers on the BLUE ANSWER SHEET that has been provided. DO NOT mark on this questionnaire.

1= I NEVER think, feel, or act this way.
2= I RARELY think, feel, or act this way.
3= I OFTEN think, feel, or act this way.
4= I VERY OFTEN think, feel, or act this way.

01. My parents and I have mastered the art of honest communication in all areas.
02. My moods get so low that it is painful.
03. I think that a successful, respected woman would not be fat.
04. In the last year, I’ve missed more than 2 menstrual periods.
05. I feel full of energy.
06. I often found myself in the middle of my parent’s arguments.
07. I try to get things done, but I feel too slow or sluggish.
08. When I throw-up, I feel less nervous about gaining weight afterwards.
09. Lately, I feel unusually tired.
10. I feel very nervous when something gets in the way of my exercise schedule.
11. I have sudden changes in my mood.
12. If I eat a sweet roll, my body will likely turn it into fat.
13. I have periods of sadness that last for days.
14. I think that any person aware of fitness will always exercise with great energy.
15. I feel hollow and empty inside.
16. Certain thoughts really bother me because they repeat in my mind over and over again.

17. I feel worn out.

18. Within the last month or so, I’ve thought about suicide.

19. If I start eating, I won’t be able to easily stop.

20. Anyone can be overweight, but it takes someone special to be thin.

21. Even when I do something well, I still don’t feel very worthwhile.

22. I go back and forth between trying to diet, and suddenly eating more snacks than most people eat in several days.

CHECK YOUR ANSWER SHEET. YOU SHOULD HAVE JUST MARKED ITEM # 22.

1 = I NEVER think, feel, or act this way.
2 = I RARELY think, feel, or act this way.
3 = I OFTEN think, feel, or act this way.
4 = I VERY OFTEN think, feel, or act this way.

23. My muscles seem to lack energy.

24. The food I eat is rapidly turned to fat.

25. Being overweight is a sign of serious weakness in one’s personality.

26. I probably please my parents far more than I disappoint them.

27. I wake up a lot during the night, and toss and turn when I sleep.

28. My worries keep me from getting other things done.

29. I feel like giving up.

30. Lately, it takes extra effort to get myself started doing things.

31. Weekends and holidays should be like any other day to a person who is serious about regular exercise and fitness.

32. For no reason, my heart will pound or race, and I will feel on edge.
33. People who are overweight risk rejection by loved ones.

34. I wish I felt more lively and energetic.

35. Others tend to be too worried about my health.

36. When I need to concentrate, my mind seems to wander.

37. Thin people are much happier than overweight people.

38. I would like to weigh myself several times a day.

39. My parents told me that things were O.K., even when I really sensed they were not.

40. My menstrual periods are very regular.

CHECK YOUR ANSWER SHEET. YOU SHOULD HAVE JUST MARKED ITEM #40.

1= I NEVER think, feel, or act this way.
2= I RARELY think, feel, or act this way.
3= I OFTEN think, feel, or act this way.
4= I VERY OFTEN think, feel, or act this way.

41. It is/was nearly impossible to change my parents' mind about something.

42. If I eat too much, I just can't hold it down.

43. Butterflies or jitters in the stomach are with me much of the day.

44. I have eating sprees where I suddenly eat as much food as most people eat during a period of two days.

45. Even though I've carefully checked my work, I continue to feel the urge to recheck it again.

46. Others would prefer if I ate more.

47. Medicine that gives my diarrhea is a regular part of my diet.

48. Most of the time, it is/was useless to try to get my way at home.

49. At least twice a week, I start an eating spree and can't stop until my stomach hurts terrible.
50. The activities that usually bring me joy don’t make me happy these days.
51. If I gain two more pounds, I won’t be able to comfortably wear a swimsuit.
52. By the middle of the day, I am so fatigued that I have a hard time finishing my work.
53. Others say my weight is too low, but certain areas of my body still feel very fat.
54. If I fail in my diet, I must be a weak person.
55. It takes a lot of time to unwind or relax.
56. I take diet pills to help me lose weight.
57. When I wear loose-fitting clothes, others are less likely to lecture my to stop dieting.
58. I have frequent diarrhea.
59. While most women are concerned about their body shape, I am unusually worried about mine.
60. I think about all the calories I will burn up when I exercise.
61. I wish my nerves would calm down.
62. I feel restless if I am unable to be active after eating a meal.

CHECK YOUR ANSWER SHEET. YOU SHOULD HAVE JUST MARKED ITEM #62.

1= I NEVER think, feel, or act this way.
2= I RARELY think, feel, or act this way.
3= I OFTEN think, feel, or act this way.
4= I VERY OFTEN think, feel, or act this way.

63. I would say that being able to really get close to someone you like, has a lot to do with being as thin and attractive as possible.
64. Throwing-up is a convenient way for me to avoid too many calories.
65. I feel especially guilty about my weaknesses and failures these days.
66. My friends say I am too thin; however, I really feel quite fat.
67. In public, I eat sensibly; but when alone, I will quickly eat enough food to satisfy 3-4 people.

68. Other people seem less sad than me.

69. The more I struggle to keep my weight down, the more I seem to have eating sprees.

70. I have to fight to convince people that I don’t need as much food as others to be healthy.

71. I feel nervous inside every day.

72. I have attacks of anxiety where I feel something terrible may happen.

73. Conflicts arise at home that never get talked about.

74. I wonder if the things I worry about would seem silly to other people.

75. I rarely take the time to exercise to lose weight.
PERSONAL INFORMATION

Address: 513 E. Steep Mountain Dr.
Draper, UT. 84020
Tel. (801) 501-7649
Fax (801) 501-8219
e-mail: hawkins@inconnect.com

EDUCATION

Utah State University, Logan, Utah; projected completion date: 1999
Degree: Ph.D.
Major: Clinical/Counseling Psychology
Cumulative GPA: 3.92

Utah State University, Logan, Utah 1996
Degree: M.S.
Major: Counseling Psychology
Cumulative GPA: 3.92

Santa Clara University, Santa Clara, California 1993
Degree: B.S.
Major: Psychology
Cumulative GPA: 3.9 Magna Cum Laude

ACADEMIC HONORS

Honorary Academic Award, The National Dean’s List 1995-1998
Graduate Student Representative Elect, Utah State University 1995-1996
Utah State University Psychology Department Scholarship 1995
Graduate Student Honor Roll, Utah State University 1995-1998
Wilhelm Wundt Award, Outstanding Performance in Academics & Research, Santa Clara University (SCU) 1993
Phi Beta Kappa, Pi of California at Santa Clara University 1993
CLINICAL EXPERIENCE

CLINICAL INTERNSHIP

Psychology Intern Sept 1998- Aug 1999
VA Medical Center (APA Approved), Salt Lake City, UT
Full-time (40 hr/wk) position

Medical Psychology Consultation and Neuropsychology Rotation:
Responsibilities include assessment and treatment of a variety of psychosocial factors influencing medical conditions. Provide psychological consultation to several hospital departments. Perform cognitive, mood, neuropsychological, and personality assessments. Supervisors: Kay Koellner, Ph.D., Tom Schenkenberg, Ph.D., & Scott Hill, Ph.D., Licensed Psychologists.

Inpatient Psychiatry/Outpatient Rotation: Responsibilities include representing psychology on a multidisciplinary treatment team, assessment, individual therapy, co-leading daily group therapy, and teaching psychoeducational classes. Supervisor: Richard Weaver, Ph.D., Licensed Psychologist.

Total Projected Supervised Hours: 2000

CLINICAL EXTERNSHIPS/ASSISTANTSHIPS

Counseling Psychology Assistant Oct 1997- June 1998
Utah State University Counseling Center, Logan, UT
Half-time (20 hr/wk) position

Responsibilities: Individual, marital, and group therapy for university students presenting with diverse emotional and behavioral problems; psychological evaluations
and reports; in-center crisis coverage 1 day per wk; supervisor of peer counselors; eating disorder outreach services.

Supervisors: Mary Doty, Ph.D.; David Bush, Ph.D.
Total Client Contact Hours (through June, 1998): 340
Indirect Service Hours: 112
Supervision and Case Conference Hours: 228
Total Hours: 680

**Clinical Psychology Extern**
July 1997- March 1998
Behavioral Health Unit, Logan Regional Hospital, Logan, UT
Part-time (10-15 hr/wk) position

Responsibilities: Individual, marital, family, and group therapy for inpatient adolescents, adults, and elderly patients experiencing acute and long-term behavioral, health, and/or psychological difficulties; multi-disciplinary staff meetings three times a week; psychological evaluations and reports.

Supervisor: Bruce Johns, Ph.D.
Total Client Contact Hours (through June, 1998): 300
Indirect Service Hours: 116
Supervision and Case Conference Hours: 150
Total Hours: 566

**Clinical Psychology Extern**
Bear River Mental Health Services, Inc., Logan, Utah
Half-time (20-25 hr/wk) position

Responsibilities: Individual, marital, and group therapy for clients of all ages experiencing a variety of clinical issues (i.e. depression, anxiety, suicidal ideation, thought disorders); group therapy for court ordered clients; in-center/emergency crisis intervention 1 day per week; adult and juvenile court ordered psychological evaluations; Cache County Jail Outreach Services; disability evaluations; adult mental status exams; community presentations; weekly multidisciplinary crisis meetings.

Supervisor: Leland Winger, Ph.D.
Total Client Contact Hours: 658
Indirect Service Hours: 387
Supervision Hours: 82
Total Hours: 1127

**Psychology Specialist Assistant**
June 1995- Aug 1996
Center For Persons With Disabilities, Community Family Partnership
Utah State University, Logan, UT
Part-time (20 hr/wk) position
Responsibilities: Provided adults, adolescents, children, and families mental health therapy for various emotional and behavioral problems; periodic mental health screenings; psychoeducational assessments and reports; case presentations; home visits; coordinator of Project Literacy; project leader of Infant Temperament Assessment project.

Supervisors: Phyllis Cole, Ph.D.; Pat Truhn, Ph.D.
Total Client Contact Hours: 424
Indirect Service Hours: 653
Supervision Hours: 77
Total Hours: 1154

Eating Disorder Therapist
USU Eating Disorder Laboratory
Utah State University, Logan, UT
Part-time (5 hr/wk) position

Jan 1995- June 1998

Responsibilities: Individual and group therapy for clients with anorexia nervosa, bulimia nervosa, and binge-eating disorder; recruitment and intake screening; structured psychoeducational group therapy; psychological evaluations.

Supervisor: David Stein, Ph.D.
Total Client Contact Hours: 106
Indirect Service Hours: 22
Supervision Hours: 36
Total Hours: 164

Clinical Psychology Therapist
Psychology Community Clinic
Utah State University, Logan, UT
Quarter-time (5 hr/wk) position

Sept 1995- June 1998

Responsibilities: Individual, couples, and family therapy for children, adolescents, and adults presenting with various psychological and behavioral problems; intake interviews and psychodiagnostic assessments; comprehensive psychological evaluations; case presentations.

Supervisors: Susan Crowley, Ph.D.; David Stein, Ph.D.
Total Client Hours: 157
Indirect Service Hours: 87
Supervision Hours: 134
Total Hours: 378

PRACTICUM TRAINING

Clinical Psychology Practicum Therapist
Behavioral Health Unit, Logan Regional Hospital, Logan, UT

Oct 1996- June 1997
Part-time (12 hr/wk) position

Responsibilities: Co-leading group therapy with adults and adolescents in a locked inpatient facility; achievement and intelligence assessments; psychological evaluations; consulting with Dayspring (drug and alcohol unit); multi-disciplinary staff meetings three times a week.

Supervisor: Bruce Johns, Ph.D.
Total Client Contact Hours: 197
Indirect Service Hours: 43
Supervision and Case Conference Hours: 120
Total Hours: 360

Counseling Psychology Practicum Therapist
Utah State University Counseling Center, Logan, UT
Quarter-time (10 hr/wk) position

Responsibilities: Individual therapy for college students with a variety of clinical issues (i.e. eating disorders, trauma, depression, and adjustment difficulties); weekly psychotherapy group for women with eating disorders; facilitator during Eating Disorders Awareness week; case presentations; intake reports.

Supervisors: Mary Doty, Ph.D.; David Bush, Ph.D.
Total Client Contact Hours: 220
Indirect Service Hours: 57
Supervision Hours: 123
Total Hours: 400

Child Clinical Psychology Practicum Therapist
Human Learning Clinic
Utah State University, Logan, UT
Quarter-time (10 hr/wk) position

Responsibilities: Conducting assessments and intake interviews with children ages 5 to 16 years old; selecting and designing appropriate learning strategy interventions; developing multi-disciplinary treatment plans; providing therapy for clients on a weekly basis; supervisor of student instructors; case presentations; facilitator of parent education groups.

Supervisor: Lani Van Dusen, Ph.D.
Total Client Contact Hours: 135
Indirect Service Hours: 92
Supervision and Case Conference Hours: 63
Total Hours: 290
Clinical Psychology Practicum Therapist  
Psychology Community Clinic  
Utah State University, Logan, UT  
Quarter-time (10 hr/wk) position  
Sept 1993-Sept 1995

Responsibilities: Individual and couples therapy for children, adolescents, and adults presenting with diverse behavioral, psychological, and health concerns; intake interviews and psychodiagnostic assessments; comprehensive psychological evaluations; case presentations.

Supervisors: Susan Crowley, Ph.D.; David Stein, Ph.D.  
Total Client Hours: 203  
Indirect Service Hours: 98  
Estimated Supervision Hours: 190  
Total Hours: 493

OTHER CLINICAL EXPERIENCE

Counseling Psychology Practicum Therapist  
Julian Street Inn Homeless Shelter, San Jose, CA  
Quarter-time (5 hr/wk) position  
Jan 1993- Mar 1993

Responsibilities: Therapeutic support for minority clients enrolled in day-treatment program who were homeless and experiencing chronic mental illness; case management.

Supervisor: Robert Lowe, Ph.D.  
Total Client Hours: 32  
Indirect Service Hours: 6  
Supervision Hours: 15  
Total Hours: 53

Counseling Psychology Practicum Therapist  
Beverly Manor Nursing Home, San Jose, CA  
Quarter-time (5 hr/wk) position  
Jan 1992- June 1992

Responsibilities: Therapeutic support for elderly patients experiencing depression and various health problems; facilitator of psychoeducational group.

Supervisor: Robert Lowe, Ph.D.  
Total Client Hours: 40  
Indirect Service Hours: 17  
Supervision Hours: 32  
Total Hours: 89
RESEARCH EXPERIENCE

RESEARCH ASSISTANTSHIPS/CONSULTING

Research Consultant
Early Intervention Research Institute (EIRI)
Center for Persons with Disabilities, Logan, UT.
Quarter-time (10 hr/wk) position

Responsibilities: Collect and analyze articles for meta-analysis evaluating effectiveness of home visiting as a means of service delivery for children with disabilities. Supervisor: Richard Roberts, Ph.D.

Research Consultant
Human Learning Clinic
Utah State University, Logan, UT.
Quarter time (10 hr/wk) position

Responsibilities: Administering WAIS-R to 30 university students; training graduate students on the administration of the WAIS-R; report writing. Supervisor: Lani Van Dusen, Ph.D.

Research Assistant
Early Intervention Research Institute (EIRI)
Center for Persons with Disabilities, Logan, UT.
Half-time (20 hr/wk) position

Responsibilities: Identifying effective interventions for working with children with disabilities; collecting data for meta-analysis; training graduate students; conducting discussion groups; data analysis (via SSPS for windows); creation, distribution, and analysis of a national survey examining the effects of home-based interventions on children who are at risk for social, emotional, and developmental problems. Supervisor: Richard Roberts, Ph.D.

Research Consultant
Healthy Families of Utah, Midvale, UT.
Quarter time (10 hr/wk) position

Responsibilities: Identifying parents at risk for child abuse/neglect; data collection centered on identifying risk factors and tracking families; developed coding instrument; coding data; data analysis; evaluation report. Supervisor: Richard Roberts, Ph.D.
Research Assistant  
Stanford Lucidity Institute  
Santa Clara University, Santa Clara, CA.  
Quarter time (10 hr/wk) position  

Responsibilities: Developing and critiquing empirical measures for analyzing self-reflectiveness in dreams; collecting data; writing reports and grants; data analysis. 
Supervisor: Tracy Kahn, Ph.D.

Research Assistant  
Santa Clara University, Santa Clara, CA.  
Quarter time (10 hr/wk) position  

Responsibilities: Testing subjects on memories for perceived and imagined figures rotated on a computer screen; data collection; supervised collection procedures; statistical analyses. Supervisor: Tracy Kahn, Ph.D.

Dissertation  
Doctoral dissertation in progress, Utah State University, Logan, UT.

Faculty Advisor: David Stein Ph.D., Head, Department of Psychology, Utah State University.

Thesis  

Faculty Advisor: Richard Roberts Ph.D., Department of Psychology, Utah State University.

Conference Presentations & Publications  


Community Presentations


**Curriculum Development**


**Professional Training Workshops Attended:**


Dursoe, M. (1997). *Administration, scoring, and clinical interpretations of the substance abuse subtle screening inventory (SASSI-3).* Center for Persons with Disabilities Conference. Logan, UT.

Briere, J. (1997). *Assessment and Treatment of Trauma.* 3rd Annual Utah State University Counseling Center Conference. Logan, UT.


TEACHING EXPERIENCE

**Teacher Assistant**  
Psychology 321 Abnormal Psychology  
Utah State University, Logan, UT  

Responsibilities: Lecturing; supervising honor students; grading papers and tests; writing sections of the exams. Supervisor: Richard Roberts, Ph.D.

Spring 1995

**Teacher/Counselor**  
Salt Lake County Recreation  
Kearns, UT  
Full time (40 hr/wk) position  

Responsibilities: Education programs; field trips; behavior management program; exercise program. Students were ages 8 to 14.

June 1993 - Aug 1993

**Teacher Assistant**  
Cognitive Psychology  
Santa Clara University, Santa Clara, CA  

Responsibilities: Held office hours; graded assignments and exams; prepared portions of lectures. Supervisor: Tracey Kahn, Ph.D.

Spring 1992

**Teacher Assistant**  
San Jose Day Nursery  
San Jose, CA.  

Responsibilities: Worked in the 2-3 year old child care program; coordinated arts and crafts activities; supervised playground activities; parent education program. Supervisor: Eleanor Williamson, Ph.D.

Sept 1991 - June 1992

PROFESSIONAL AFFILIATIONS

Student Member, American Psychological Association 1995 - Present  
Member, Scientific Research Society 1993 - Present  
Member, National Honor Society in Psychology 1991-Present
PROFESSIONAL REFERENCES

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