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THE EFFECTS OF BRIEF EXPOSURE TO
NON TRADITIONAL MEDIA MESSAGES
ON FEMALE BODY IMAGE

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas

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Body image may be defined as the perception or attitude one has regarding the appearance of his or her body. Body image concerns are not only central to the diagnostic criteria of eating disorders, but also create distress for nonclinical populations.

Females (n = 167) from three universities participated in a study by completing the Eating Disorder Inventory - 2 (Garner, 1991) and the Figure Rating Scale (Stunkard, Sorenson, & Schulsinger, 1983); watching a video; and then completing the instruments again. Subjects in the treatment group (n = 89) viewed a video designed to increase awareness of unrealistic body sizes and shapes seen in the media (Kilbourne, 1995). Subjects in the comparison group (n = 77) viewed a video unrelated to female body image.

Exposure to the treatment video did not result in overall improvement in body image. Only one measure, a provisional subscale - Social Insecurity, significantly improved.

Stepdown analysis for correlated dependent variables also showed scores of both groups improved, indicating subjects' sensitization to the instruments. The lack of improvement might be explained by considering body image to be an internalized and enduring trait not readily amenable to improvement, although previous research found significant *negative* impacts of brief media exposure.

Demographic data revealed that dieting behaviors were prevalent among subjects. Very few significant relationships existed between television watching and body dissatisfaction.

However, the number of fashion magazines read per month positively correlated with subjects' drive for thinness and negatively with ideal size. The number of hours spent reading fashion magazines was also negatively correlated with ideal size. Subjects who had lost weight intentionally also read more fashion magazines each month than subjects who had not lost weight intentionally.

The significant improvement in Social Insecurity may suggest the need to increase group discussion regarding body image concerns and to explore women's reluctance to communicate positively about their bodies.

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CHAPTER I

THE EFFECTS OF BRIEF EXPOSURE TO
NON TRADITIONAL MEDIA MESSAGES
ON FEMALE BODY IMAGE

Although an inherent component of the human condition, the way an individual perceives one's own body has only received significant scientific attention in the last century. The term body image, as it is used currently in the research literature, has slowly evolved from work in various disciplines.

Cases of disturbed body image, or more specifically, preoccupation with perceived defect in physical appearance, were cited in European literature long before seen in American research. In 1903, psychiatrist Janet described the "obsession de la honte de corps" or (obsessive shame of the body) as a commonly observed phenomenon. Jahrreiss in 1930 wrote of *Schonheitshypochondrie*, a German term for beauty hypochondria, and *Hasslichkeitskummerer*, one who is worried about being ugly (Phillips, 1991, p. 1139.)

By examining concepts such as phantom limb phenomena, the field of neurology contributed to the awareness of body perceptions in the first half of the 20th century (Fisher,

1990). At the same time, the German investigator Schilder is credited with integrating the psychological perspective with the neurological in order to introduce "body image" as a more holistic concept (Fisher, 1990; Slade, 1994). American researchers Secord and Jourard (1953) presented the term body-cathexis as a measure of satisfaction with "various parts of processes" of the body (p. 343). These authors' study confirmed that feelings about the body are directly linked to feelings about the self. In her pioneering studies of anorexia nervosa, Bruch (1962) highlighted the consistent body size overestimation of anorexics as a core feature of the disease.

Concerns in the field of eating disorders drew researchers of the last two decades to more closely examine the relationships individuals have with their bodies. Within the last ten years, numerous studies have sought to more clearly define the variables involved in this relationship. Many authors (e.g., Baker, Williamson, & Sylve, 1995; R. Gardner, 1996; J. P. Goldberg, Lenart, Bailey, & Koff, 1996; Slade, 1994) agree with a multidimensional conceptualization of body image as presented in Cash and Pruzinsky (1990). These dimensions include cognition, attitudes, feelings, and behavior. Cash and Pruzinsky (1990) encourage a definition of body image that includes multiple physical attributes

such as height, facial features, and hair. Of course, the various dimensions involved in body image (such as feelings and attitudes) exist on a continuum ranging from healthy interest to unhealthy obsessions.

Baker, et al. (1995) attempted to more clearly delineate three terms used often in body image literature. They report that the phrase body size distortion has generally been used to refer to an inaccurate perceptual estimation of body size. Body dysphoria concerns negative feelings about one's body. Body dissatisfaction, they further distinguish, is traditionally associated with the discrepancy in how one sees their body and their ideal body size.

Statement of the Problem

Body image concerns are central to the diagnostic criteria of eating disorders. As described in the Diagnostic and Statistical Manual of Mental Disorders (4th ed.), anorexia nervosa is said to include, "disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight" (American Psychiatric Association, 1994, p. 545). For the individual suffering from Bulimia Nervosa "self-evaluation is unduly influenced by body shape and weight" (APA, 1994,

p. 550).

One other disorder that first appeared in the DSM-III-R in 1987 shares the feature of disturbance of body image. Body Dysmorphic Disorder (BDD) is a classification of body image disturbance reserved for the non-eating disorder population. BDD is derived from the term dysmorphophobia (APA, 1994). Dysmorphophobia is the label the Europeans have assigned to the syndrome BDD and the term used by the World Health Organization and the International Classification of Diseases, Tenth Revision (Veale, Gournay, Dryden, Boocock, Shah, Willson, & Walburn, 1996).

As described in the DSM-IV, BDD "involves a preoccupation with an imagined defect in appearance..." which "... causes significant distress or impairment in social, occupational, or other important areas of functioning" (p. 468). The specific behaviors named as a part of the disorder include frequent mirror checking or avoidance of mirrors, frequent comparisons to others, and excessive grooming behavior such as ritualized make-up application and excessive hair combing. When addressing prevalence, the DSM-IV states, "Reliable information is lacking, but Body Dysmorphic Disorder may be more common than was previously thought." (p. 467). To date, there exists very little published research involving this

disorder. Rosen and Ramirez (1998) refer to "a controversy as to whether BDD is a discrete condition or an extreme on a continuum of negative body image" (p. 447).

Again, attention to body size and shape is not inherently unhealthy. However, if "popular" women's magazines reflect cultural trends, recent publications would seem to point toward a steadily increasing prevalence of female preoccupation with body size and shape as well as perceived or imagined defects. Consider a Vogue Magazine article describing American super models' attitudes toward their bodies. "Naomi hates her feet. Cindy worries about her cellulite. Christy is touchy about her hands. Linda is sensitive about her mouth. Nadja looks in the mirror and sees nothing special." (Gandee, 1994, p. 560)

It is widely known that the prevalence of anorexia nervosa and bulimia nervosa has increased dramatically since the 1960's when they were virtually unknown disorders. After intensive examinations of body dissatisfaction over the last decade, researchers have identified poor body image as the central factor in the development of eating disorders (Geissler, Kelly, & Saklofske, 1994; Probst, Vandereycken, Coppinolle, & Pieters, 1995; Rosen, Reiter, & Orosan, 1995). Rosen, et al. (1995) further asserted that recovery from disordered eating is best predicted by body image.

Ninety percent of all anorexics and bulimics are females (APA, 1994). Body dissatisfaction among non-eating disordered women has been shown to be so prevalent that it has been deemed a "normative discontent" (Cash, Winstead, & Janda, 1986; McAllister & Calabiano, 1994; Polivy & Herman, 1987; Williamson, Barker, Bertman, & Gleaves, 1995). It appears that despite increased attention given the issue of body image by the research community, the incidence of symptomatic thoughts, feelings, and behaviors is increasing.

Consensus seems to have been reached in the areas of body image definition, prevalence, and assessment. However, mixed results have been reported regarding treatment. Although cognitive-behavioral treatments have demonstrated limited success, other therapies (interpersonal therapy, psychoeducational groups, and pharmacological therapy) show no or minimal results (Rosen, 1996). It would seem that there are still new paradigms that can be developed in order to improve treatment efficacy.

Review of Literature

A review of the literature encompassing recent samplings of many aspects of body image research follows. This broad perspective is needed for the purposes of this study as defined later.

Assessment

A great deal of research literature has explored various methods of assessing the attitudinal and perceptual elements of body image. Studies utilizing perceptual measures strive to determine an individual's perceived body size. The methods used to estimate body size ask subjects to match their bodies to various representations of human bodies. These representations range from very simplistic line drawings or silhouettes (Fallon & Rozin, 1985; Sherman, Iacono, & Donnelly, 1995; M. A. Thompson & Gray, 1995) to photographs (Sobral & Vasconcelos, 1996) to more sensitive and sophisticated video images (Gardner, 1996; Gardner & Bokenkamp, 1996; Gardner, Jones, & Bokenkamp, 1995) and even three-dimensional computer images (J. P. Goldberg, et al., 1996).

Other studies include attitudinal and affective measures (Cash, 1994; Cash & Labarge, 1996; Cash & Szymanski, 1995). The three questionnaires most often used are the Eating Attitudes Test (Garner, Olmstead, Bohr, & Garfinkel, 1982); the Eating Disorder Inventory (Garner, 1991); and the Multidimensional Body-Self Relations Questionnaire (Cash, et al., 1986).

Clinical and Nonclinical Populations

As discussed earlier, researchers now view body dissatisfaction as a core predisposing factor in eating

disorder pathology. Much of the information gained about body image and nonclinical populations has come from research using college students as subjects. Repeatedly, significant numbers of non-diagnosed college females reveal eating behaviors and attitudes closely approximating and matching clinically disordered behaviors and attitudes (Geissler, et al., 1994).

Gender Differences

Much research has found that females often overestimate their size, while men tend to underestimate their size (Betz, Mintz, & Speakmon, 1994; Jacobi & Cash, 1994; Raudenbush & Zellner, 1997). When males are found to be unhappy with their bodies, they generally report a desire to weigh more and be more muscular sometimes leading to increased usage of anabolic steroids (Blouin & Goldfield, 1995; Drewnowski, Kurth, & Krahn, 1995; Raudenbush & Zellner, 1997). Women estimate that men prefer a thinner female body than men report they prefer, just as men guess that women prefer a larger, more muscular male form than women report they prefer (Demarest & Langer, 1996; Fallon & Rozin, 1985; Jacobi & Cash, 1994).

Large percentages of women wish to be thinner (Cash et al., 1986; Fallon & Rozin, 1985; Jacobi & Cash, 1994; McCauley, Mintz & Glenn, 1988; Raudenbush & Zellner, 1997;

Spillman & Everington, 1989; Tiggemann, 1994). Higher percentages of body dissatisfaction have been reported by females (Cash et al., 1986; Fallon & Rozin, 1985; McCauley et al., 1988; Stowers & Durm, 1996). Demarest & Langer found that "average weight women were as dissatisfied as overweight men" (1996, p. 569). Young boys (ages 8 to 16 years old) rated their appearance and weight evaluations higher than girls of the same age (Mendelson, 1995). However, using projective measurements, Hayslip, Cooper, Dougherty and Cook (1997) found a more negative body image for many men when compared with women. The authors suggest "that men might consciously report being less concerned and dissatisfied with their appearance" despite "unconscious" negativity (p. 645).

Studies focused on body image and sexual orientation report significant differences in these populations. Gay men seem highly appearance oriented and tend to evidence more problematic body image than heterosexual males while lesbians generally report a more positive body esteem than heterosexual females (Franzoi, 1995; French, Story, Remafedi, Resnick, & Blum, 1996; Siever, 1994).

Age Differences

No age group appears immune from body image disturbances. In their multi-faceted study, Hayslip et al.

(1997) uncovered body image concerns across all age groups, including middle age and older adults as well as younger persons.

However, much body image research has recently been aimed at adolescents and preadolescents. J. K. Thompson, Covert, Richards, Johnson, and Cattarin found body dysphoric feelings to be strongly correlated with adolescent females perceived weight (1995). Brodie, Bagley, & Slade (1994) showed that preadolescent girls wished to be significantly thinner than they believe themselves to be. Lawrence and Thelen (1995) completed a study of children. Girls in third and sixth grade were shown to be more concerned than third and sixth grade boys about being overweight. The same girls also wanted a body size thinner than their perceived bodies, while boys' ideal body size was heavier than their perceived size. In another study, first grade children interviewed regarding their attitudes were significantly less likely to want to be friends with an overweight child than children of other body sizes (Goldfield & Chrisler, 1995).

Candy and Fee (1998) attempted to design a body image and eating dysfunction measure for preadolescents. After completing their study, these authors concluded "that by late elementary school years, dissatisfaction with body size

is clearly linked with restricting behaviors and the use of exercise to control weight and that a pattern of binge eating is also evident in some girls" (p. 124).

Racial and Ethnic Differences

Studies of various racial and ethnic populations have shown significant differences in body image perceptions and attitudes. In studies, African American females have been found to be more satisfied with their bodies than Caucasian females (Akron & Grilo, 1995; Altabe, 1998; Lawrence & Thelan, 1995; Stevens, Kumanyika, & Keil, 1994; Story, French, Resnick, & Blum, 1995; Wilfley, Schreiber, Pike, Streigel-Moore, Wright, & Rodin, 1996) despite a high incidence of overweight (Wilfley, et al., 1996) or larger body size than Caucasian women (Akron & Grilo, 1995).

Caucasian college females were found to evidence more disordered eating and dieting behaviors than Asian American college females (Akron & Grilo, 1995). Similarly, Lawrence & Thelan (1995) documented a stronger link between self-worth and overweight concerns of Caucasian third and sixth grade females when compared to their African American peers. These authors also stated that the Caucasian female children who dieted more reported lower self-worth scores. By the sixth grade, all the measured variables of the two groups were more closely aligned than in third grade.

Other authors report that cultural differences may be narrowing in the field of body image concerns. Some studies show increasing similarities and shared patterns beginning to emerge. Wilfley, et al. (1996) reported that White and Black middle age females had similar levels of eating disturbed behaviors. In a study of Mexican American adolescent women, Joiner & Kashubeck's (1996) findings of significantly disordered eating attitudes and behavior led them to conclude that these are not "exclusively... Anglo, middle to upper class" concerns (p. 419). Story, et al. (1995) discovered in a survey of public school students in grades seven through twelve that Hispanic females admitted the highest rates of diuretic use; Asian females acknowledged more frequent binge eating; and Black females reported the highest rate of vomiting behavior. Singh (1994) did not find greater acceptance of overweight bodies by college age Black men and women.

International Differences

A sampling of research shows dramatic differences in cultural attitudes and perceptions of the body. Hodes, Jones, & Davies (1996) summarized findings confirming that women from "culturally English backgrounds dislike body fat and plumper figures, and diet more as compared to age-matched peers from Afro-Caribbean and African backgrounds"

(p. 257). Their study focused on mothers from the United Kingdom and the Mediterranean. Mothers of British children believed slimmer girls to be more beautiful than did mothers of South Asian, African, and Caribbean children.

Very recently, the literature involving international body image perspectives points to signs of acculturation in traditionally non Western societies. Acculturation is defined as the adaptation of native societies toward incorporation of other societies' values, customs, and life styles. Studies have shown that Hong Kong is an example of Westernization. Lee, Leung, Lee, Yu, & Leung (1996) report that the Western emphasis on the body has begun to eclipse the traditional Chinese belief that the face is the determinant of beauty. Lee & Lee (1996) wrote "fat phobic attitudes, body dissatisfaction, and a propensity for weight control behavior are prevalent among female adolescents in Hong Kong" although most Chinese females are already thin (p. 181).

In contrast to more industrialized locales like Hong Kong, Jamaica is an example of a less highly developed area which has not yet succumbed to the Westernized preference for a thinner physique. Smith & Cogswell (1994) found no evidence of normative discontent about body size among Jamaican adolescent females. The authors concluded that "the

society's favorable attitudes toward plumpness are strong enough to counteract foreign preoccupation with thinness" (p. 746). Nonetheless, the authors added, Jamaicans are concerned about the spread of Western influence through tourism, trade, and satellite dish television.

As the Jamaican females cited in the above study, the typically stocky Polynesian women still report accurate body size estimations rather than the more Western overestimation according to a recent finding (Ben-Tovim, 1996). Ben-Tovim commented, "It is ironic that as food surpluses have become commonplace in the Western world, an increasing value is put on the female body shape that less healthy communities seek to avoid" (p. 1047).

In a final example, A. E. Becker (1990) theorized that residents of the Fiji Islands have resisted Western body preoccupation because of their cultural commitment to the collective good of the community rather than the perfection of the self. One of the ways Fijians express this commitment is measured in the well nourished bodies of those for whom they care, Becker explained.

Etiology of Body Image Disturbance

Slade (1994, p. 502) concluded that body image is "influenced by a variety of historical, cultural, and social, individual and biological factors." A review of

recent research reveals mixed findings regarding causal factors related to widespread body image disturbance. The expansive sampling of the following topics from social to personal is necessary for the purposes of this study.

Social aspects.

While the links to other factors receive varying attention, most researchers agree socio-cultural influences have an extremely pervasive impact on current body image trends. For this discussion, social factors are defined as those involved in society as a whole, such as social relatedness, comparisons, and group effects. Whereas culture is used later to refer to specific life style trends, influences, and patterns.

Authors of a recent study asserted the dominance of societal influences. Their results confirmed that internalized societal attitudes and social comparisons were the best predictors of body dissatisfaction (Stormer & J. K. Thompson, 1996). They cautioned that these factors may be "correlative, but not causative" (p. 200).

Research has applied social comparison theory to the study of body image. As can be seen from the previous description of selected articles highlighting gender differences, males and females generally report very different comparative sets. Fisher (1995) found that these

"comparison schemas" are strongly established for girls and boys by sixth grade.

If school environments can be seen as an example of a microcosm of society, interesting lessons are offered from examinations of private schools. Lewis (1989) found the strong expectations for achievement in one private school setting to be related to a majority of female upper school students who worry about their weight. When asked why, one survey respondent wrote "our society requires everybody to be thin" (p. 23).

Familial contributions.

As evidenced by Root, Fallon, & Friedrich's work (1986), until recently the family's significance on eating disorder behavior was rarely questioned by experts in the field. Root et al. (1986) presented research to support three classic family types that are strongly related to anorexia and bulimia: a) the perfect family, b) the overprotective family, and c) the chaotic family.

Paul (1995) reported no relationship found between the intensity of body image disturbance and family dysfunction. In one of the few comparative studies of multiple influences, V. S. Becker (1996) found that media messages, gender role, and peer pressure had a stronger effect on female body image than family members.

There appears to be evidence that mothers' greatly shape daughters' attitudes toward their bodies. Studies document how daughters' imitate their mothers' dieting patterns (Goldberg, E. S., 1993; Waterhouse, 1997). Among other findings, Larson (1989) revealed that daughters of employed mothers had significantly higher body dissatisfaction and drive for thinness scores. However, in a recent study (Ogden & Elder, 1998) found no significant correlation between mothers and daughters for measures of body dissatisfaction.

Maine (1991) coined the term "father hunger" to explain the lack of a strong father figure as related to females' troubled relationships with food and their bodies. Davis (1995) arrived at significant correlations between less than favorable attitudes toward fathers and poor body image.

Gupta and Schork's (1995) research study supported assertions that a lack of touch in infancy and childhood is strongly related to the drive for thinness. They wrote, "We have observed a direct correlation between a perception of relative deprivation of hugging and cuddling during childhood and DT [drive for thinness]... among females but not males from a nonclinical sample" (p. 187).

An interesting phenomenon that is well represented in the literature is the strong relationship of body

dissatisfaction to teasing in childhood (e.g., Akron & Grilo, 1995; Grilo, Wilfley, Brownell, & Rodin, 1994; J. K. Thompson, et al., 1995; Weiner & J. K. Thompson, 1997). Phillips (1991) labeled "chance remarks" about body parts as "acute precipitating factors" related to Body Dysmorphic Disorders. Authors note that often these comments or remarks are made by family members.

The role of sexual abuse history in body image disturbance is often controversial. Research has supported both sides of the argument. Recently, Weiner and J. K. Thompson (1997) found a significant relationship between covert sexual abuse and body image problems. Again, like all associations a correlation does not equate to causation.

Bio-physiological perspectives.

Cowley (1996) summarized scientific findings regarding a biological drive behind attraction. For example, researchers believe that an acknowledged preference for a high waist to hip ratio (regardless of body size) may be related to fertility.

Authors who study Body Dysmorphic Disorder document moderate pharmacological success in treating BDD (Phillips, 1991; Phillips, McElroy, Keck, Pope, & Hudson, 1993; Veale, et al., 1996). The relative effectiveness of selective serotonin reuptake inhibitors suggests a strong relationship

of BDD to the existence of obsessive compulsive elements in brain chemistry. Interestingly, research aimed at establishing a connection between body image obsessiveness and a tendency toward other addictive behaviors such as smoking and sexual addiction has found little correlation (Franklin, 1991; Nichter, 1995; Xinaris & Boland, 1990).

A discussion of the physiology of body dissatisfaction would not be complete without a mention of the physical effects of dieting. Healthy attention to one's appetite, food cues and meal planning is essential to overall wellness. However, rigid and repeated dietary restraint encourages eventual overeating, lowered metabolism, obsession, failed attempts, frustration, helplessness, depression, and lowered body satisfaction (Brownell & Jeffrey, 1987; Cash, 1994a; Cash & Pruzinsky, 1990; Green & Saenz, 1995; Kirschenbaum & Fitzgibbon, 1995; Koenig & Wasserman, 1995). Stice, Nemeroff and Shaw (1996) found statistical validation for their model suggesting that body dissatisfaction leads to dieting which leads to binge eating. Root et al. (1986) report that eating disorders often begin subsequent to a period of dieting. Drewnowski et al. (1995) wrote that men rarely diet to lose weight. If dieting is successful, even after weight loss, researchers find that a negative body image often persists (Cash &

Pruzinsky, 1990).

Intrapersonal characteristics.

As discussed earlier, it is widely accepted that the degree of body image disturbance appears directly related to the severity of other eating disorder characteristics. Non-eating disordered individuals share personality characteristics related to poor body image. Akron & Grilo (1995) highlighted low-self esteem and high public consciousness in college females with body disturbances. Koff and Sangani (1997) concluded that a coping style based on emotions was significantly related to general body dissatisfaction and body size distortion. Many authors have documented the extreme incidence of perfectionism related to obsessiveness about one's body (Bastiani, Rao, Weltzin, & Kaye, 1995; Cash & Pruzinsky, 1990; Mitzman, Slade, & Dewey, 1994; Phillips, 1991; Pliner & Haddock, 1996; Veale, et al., 1996).

It is also widely accepted in the field of eating disorders that the issue of control is a central one. Pliner & Haddock (1996) describe the "defining characteristic" of anorexia as "a slavish conformity to external standards" (p. 388). It is believed that as women feel a lack of control or fragmentation of their identity, they seek to control their bodies to extremes. Waller & Hodgson (1996) analyzed the

difficulty of tasks as related to the perceived control and found women with eating disorder diagnoses to be pessimistic when a task is perceived as difficult. They also found that non-eating disordered women were slightly more satisfied with their bodies when the task was manageable. Koenig & Wasserman (1995) described increased feelings of helplessness for female adolescents as puberty brings boys closer to a body ideal but takes females further away from it.

Researchers have also addressed the overrepresentation of depression among females who are dissatisfied with their bodies (Baker, et al., 1995; Carter, Bulik, Lawson, Sullivan, & Wilson, 1996; Koenig & Wasserman 1995; McCarthy, 1990; Rierdan & Koff, 1997). The correlative nature of this association appears to be very strong.

Authors have also recently begun to examine in greater depth the effects of traditional sex role orientation female body disturbance. Women who acknowledged feminist orientations and ideology showed lower rates of poor body esteem in several studies (Dionne, Davis, Fox, & Gurevich, 1995; Kelson, Kearney-Cooke, 1990; McKinley & Hyde, 1996; Srebnick & Saltzberg, 1994).

Media influences.

Many researchers implicate the American media as a

primary contributor to body dissatisfaction and unhealthy attempts to achieve an idealized physique (Becker, V. S., 1996; Brownell & Napolitano, 1995; Cash & Pruzinsky, 1990; Collins, 1996; Goodman, 1996; Hayslip, et al., 1997; Irving, 1990; Lintott, 1993; Nemeroff, Stein, Diehl, & Smilack, 1994; Ogden & Elder, 1998; Rocchio, 1996; Silverstein, Perdue, Peterson & Kelly, 1986; Silverstein, Peterson & Perdue, 1986; Slade, 1994; Tiggemann & Pickering, 1996). Support for the implication of the media as a negative factor can be found when considering the dramatic differences in body image ideals around the globe, as discussed earlier. The influence of the advent of western mass media on non westernized countries was previously noted when discussing studies by Lee, et al., 1996 and Lee & Lee, 1996.

Studies have examined the impact of magazines, television, videos and even children's' dolls. Silverstein, Peterson, et al. (1986) presented evidence that the period in this century when photographs in women's magazines showed the lowest bust to waist ratio was in the mid 1920's. Excerpts from major publications (including the New York Times and Saturday Evening Post) in 1926 and 1927 reported alarming numbers of women "starving themselves" to reach the noncurvaceous standard. Bust to waist ratios reflected in

the same magazines dipped again beginning in the late 1960's.

In a landmark study, researchers examined "Playboy" centerfolds, Miss America Pageant contestants, the contents of popular women's magazines and the size and weight of the average American female from 1959 to 1978. The body size of the first three categories (representing the cultural ideal) decreased over this time period while the weight of the average woman became heavier (Garner, Garfinkel, Schwartz & M. Thompson, 1980). The authors of the study also found a dramatic increase in articles related to dieting in women's magazines. The authors cite evidence that dieting has been related to increased vulnerability to food cues, thus increased attempts to lose weight may well be associated with increased weight. In a follow-up study, Wiseman, Gray, Mosimann & Ahrens (1992) found similar results in the years 1979 to 1988. These researchers found a further decrease in body size of Miss America contestants and a continuation of dangerously low weights for a majority of "Playboy" centerfolds. Dangerously low weights are defined as those 15% or more below the expected weight for age and height.

After a content analysis of magazine articles from the time period of 1980 to 1991, Nemeroff et al. (1994) also found a preponderance of beauty and weight loss articles in

female targeted magazines when compared to magazines aimed at male readers. The findings of Snow and Harris (1986) also revealed an increase in dieting articles and other products that promoted thinness in their women's magazine content analysis from 1950 through 1983, along with a decrease in the weight of models. In addition, this report found that when men were pictured it was more often their faces rather than their bodies as compared to women. As other authors have concluded, Snow & Harris suggested that dieting in order to meet cultural ideals is responsible for increased obesity and eating disorders. They point to research that shows repeated dieting results in higher metabolic "set points."

An interesting paradox was confirmed by Silverstein, Perdue et al. (1986). Not only did these researchers also find that women receive significantly more messages related to thinness than do men in popular magazines but women also receive far more encouragement to eat. They documented 1,179 food advertisements in 48 women's magazines versus 10 food advertisements in 48 men's magazines. This study also concluded by (analysis of 38 actresses) that female representations of cultural ideals have become thinner and less curvaceous since 1940.

Brenner and Cunningham (1992) documented that

successful female fashion models were 9% taller than the average woman and weighed 16% less. Interestingly these researchers found that "eating disordered behavior was as likely to exist in average women attempting to attain the ideal of slenderness as it was in the slender women representing our cultural ideas." They further suggest that these models "possess statistically infrequent body structures" (p. 434). Brodie, Drew, & Jackman (1996) discovered that subjects so expect models to be thin that they rated drawings of the same size female to be thinner when dressed as a fashion model than as a student or a cook.

To test whether one popular cultural body image is unrealistic, Brownell & Napolitano (1995) compared the measurements of human subjects to Barbie and Ken dolls. At that time, in order to approximate the Barbie doll's proportions, the average human female subject would have to be 24 inches taller, 5 inches larger in the chest, and 6 inches smaller in the waist.

Goodman (1996) interviewed women from ages 29 to 75 years old. She concluded that their evaluations of their bodies were based on the media's depiction of women when they were adolescents and young adults. Women currently younger than 30 years old were the most dissatisfied with their bodies. In addition, she found these younger women

were "more willing to subject themselves to invasive body-altering surgeries in spite of the risks associated with these procedures" (p. 70).

Questionnaires and in-depth interviews with female high school students completed by Collins (1996) supported the notion that adolescents are very susceptible to media images. The subjects specified the media as a "major" negative influence on their body image.

This body of research speaks to the strong relationship between images presented by the media and females' perceptions of their body size. The following question then arises. Is the media creating or simply reflecting the standard of thinness? Research has focused on the immediate impact of media images on subjects in order to investigate a causal rather than just correlative relationship. The following studies have measured differences in pretest and posttest body image scores after exposure to various forms of media presentations.

Irving (1990) revealed that regardless of level of bulimic symptomatology, subjects reported lower levels of weight satisfaction and self-esteem immediately after exposure to slides of thin models. Stice and Shaw (1994) conducted a similar study. Based on the premise that "bulimia is viewed as an over-adaptation to a cultural norm,

rather than a discrete psychopathology" (p. 289), these authors found that body dissatisfaction and "subscription to the thin-ideal predicted bulimic symptoms" (p. 288). In addition, they documented greater levels of shame, guilt, unhappiness, depression, stress and lowered confidence immediately after exposure to thin female models depicted in magazines. They also strongly suggested that these negative affects combined with body dissatisfaction may lead to restrained eating and/or binge eating.

Stice, Schupak-Neuberg, Shaw and Stein (1994) believed their research demonstrated "a direct effect of media exposure on eating disorder symptoms" (p. 836). Statistical analyses revealed that greater levels of media exposure were directly related to eating disorder symptomatology. Indirect, but significant relationships also led these researchers to support the implication that "the effects of internalization of the thin ideal on eating pathology are mediated through body dissatisfaction" (p. 839).

Slade (1994) cited studies that documented eating disordered subjects' increase in body size overestimation immediately after reviewing magazine pictures of thin female models. Contrary to female responses, Rocchio (1995) demonstrated that male attitudes toward women's bodies were not changed after exposure to advertisements featuring

female models. Lintott (1993) discovered mixed results when she studied "diet" commercials. Female subjects reported no change in body image or self-esteem when diet commercials featured a female spokesperson, but significant "disparagement" of female viewers after watching a similar advertisement with a male spokesperson.

In another study of television viewing adolescent females were shown to have body dissatisfaction posttest scores that were significantly higher than pretest scores after watching movies and soap operas (Tiggemann & Pickering, 1996). In the same study, scores measuring a drive for thinness were significantly elevated after watching music videos.

Turner, Hamilton, Jacobs, Angood and Dwyer (1997) randomly assigned college females to two groups. Half the subjects were given popular fashion magazines and half were given news magazines. After only 13 minutes of exposure, the subjects given popular fashion magazines reported significantly more fear of "getting fat", preoccupation with thinness, guilt during and after eating and frustration about their weight than the subjects exposed to a news magazine.

These studies suggest significant changes in subjects' body image attitudes and perceptions after exposure to

messages contained in contemporary media formats. Stice and Shaw (1994) stated the following in their discussion of studies such as those presented:

In sum, the present findings provide experimental evidence that the ideal-body images portrayed in popular women's magazines have deleterious effects on the affective state and body satisfaction of female readers. The convergence of correlational and experimental studies promotes increased confidence in this conclusion. (p. 302)

The research cited utilized actual samples or simulated representations of existing television, videos or printed media. There was no research found which measured the impact on subjects of an educational presentation aimed at exposing the popular media's typical messages regarding the female body. Nor were any published studies uncovered that produced an improvement in body image perceptions and/or attitudes after exposure to a media based presentation.

Purpose of the Study

The purpose of this study was to measure the impact on female body image attitudes of an educational video containing information not traditionally presented in contemporary magazine and television advertising. As was noted previously, a negative body image attitude has

consistently been implicated as a core feature in the development of anorexia nervosa and bulimia nervosa. For the purposes of this study, body image is defined as the perception or attitude that an individual has regarding the appearance of his or her body. If a video presentation such as the one to be used in this study is shown to have a significant impact, perhaps it could be utilized as a psychoeducational tool in the treatment of eating disorders.

CHAPTER II

RESEARCH DESIGN

Research Questions

This study was designed to address the following research questions. Will female body image attitudes and/or perceptions be improved after viewing an educational video presentation? Will the same medium implicated as a factor negatively influencing female body image be useful in positively impacting body image attitudes by highlighting cultural ideals, describing unrealistic standards and debunking possible myths asserted by popular media?

Hypotheses

It was hypothesized that significant improvement in female body image attitudes and perceptions would result after viewing an educational video presentation aimed at unveiling negative messages portrayed by contemporary media. More specifically, this improvement would be reflected in a significant difference in the pretest and posttest scores of the treatment group who view the video. It was further hypothesized that this difference will be more significant than the difference in pretest and posttest scores of the subjects who are exposed to a comparison video selection

completely unrelated to the topic of female body image.

Subjects

Subjects were student volunteers from three universities in North Central Texas. A student population was chosen primarily due to reasons of availability. For ethical reasons, students could not be forced to participate thus resulting in a volunteer population. This greatly limits the representativeness of this sample as will be discussed later in greater detail.

Students were recruited primarily from sophomore and junior level English classes. It was hoped that approaching students in English classes would yield a more general representation of perspectives and attitudes than those obtained by recruiting exclusively from classes in specialty areas such as Psychology.

The participants were all at least 18 years of age. No one was excluded on the basis of ethnicity, physical impairment or health status. Rather than excluding subjects with symptoms of diagnosable eating disorders, the instruments screened for such symptoms and their occurrence was included in the statistical analysis.

In order to establish an appropriate statistical power, computer analysis revealed that a minimum of 75 subjects was necessary. The power was determined by the alpha level

selected, the directionality of the hypotheses and the proposed statistical analyses.

All subjects were informed of the nature of the study and any possible adverse effects or potential risks that may result from participating in the study (see Appendix A). Participants were asked to sign and retain a copy of the consent form which gave the project director's name and telephone number. Code numbers were selected by participants in order to protect the anonymity and confidentiality of all responses. Subjects were allowed to discontinue their participation at any time and for any reason. At the end of their participation, each participant received resources related to further information on the research topic (see Appendix B).

Of the 185 females who participated, 18 did not fully complete their involvement for unspecified reasons. As shown in Tables 1 and 2, the remaining 167 female subjects represented a variety of ethnic origins, classifications, ages, heights and weights. Of 96 female subjects exposed to the treatment video, 89 completed their participation. Of the 89 female subjects who viewed the comparison video, 77 completed their participation.

Table 1

Age, Weight and Height of All Subjects Who Completed
Participation

Variable	Mean	Range	
		Minimum	Maximum
Age in years	21.2	18.0	43.0
Weight in pounds	135.6	90.0	240.0
Height in inches	65.3	54.0	74.0

Note. n = 167.

Table 2

Demographics of All Subjects Who Completed Participation

<u>Characteristic</u>	<u>n</u>	<u>%</u>
Ethnicity		
African American	20	11.98
Asian	2	1.21
Caucasian	103	61.68
Hispanic	3	1.80
Native American	2	1.21
Pacific Islander	1	0.60
Unknown	35	20.96
Classification		
Freshman	52	31.14
Sophomore	51	30.54
Junior	34	20.36
Senior	29	17.37
Graduate Student	1	0.06
Marital Status		
Single	149	89.22
Married	15	8.98
Divorced	3	1.80
School		

State University	47	28.14
Private University	91	54.49
Woman's University	29	17.37
Group		
Treatment	89	53.61
Comparison	77	46.39

Procedures

Only one researcher, the project director, was involved in implementing the research, collecting the data and interacting with subjects. Faculty members on the three campuses were approached and informed of the details involved in the project. Faculty were asked not to reveal the nature of the research to potential subjects. Faculty granted permission for the researcher to address their classes. The researcher read a standardized statement requesting volunteers (see Appendix C). A majority of faculty allowed the research to take place in the classroom. Students whose professors did not allow classroom use reported to the Center for Counseling and Human Development on the University of North Texas campus or a reserved classroom facility on the Texas Christian University campus. Each room was equipped with a video cassette recorder/player.

Upon arrival at the treatment site, all subjects were given a packet of documents containing the pretest measures including: a) informed consent information (see Appendix A), b) a demographic questionnaire (see Appendix D), c) a Figure Rating Scale (see Appendix E), d) EDI-2 questionnaire (Garner, 1991), and e) the EDI-2 answer sheet. The researcher then read aloud the standardized instructions to subjects as seen in Appendix F.

For the purposes of this discussion, the groups will be referred to as the treatment group and the comparison group. Instructions to both groups were the same. The video presentation was the only factor that differed in the information the two groups received.

The treatment group was shown a psychoeducational video taped presentation addressing female body image. The video is entitled "Slim hopes: Advertising & the obsession with thinness" (Kilbourne, 1995). The presenter and author of the video's script, Jean Kilbourne has spent 25 years researching the media's portrayal of women's images. The video was 30 minutes in length. See Appendix G for a more detailed description of the treatment video's content.

A clinician specializing in the treatment of women with eating disorders and body image concerns, Anetta Ramsay, Ph.D., reviewed the video to provide input on its relevance

and suitability to this research project. Dr. Ramsay is a private practitioner who has specialized in the treatment of eating disorders for over 13 years. She found the video's content and format to be accurate, relevant and appropriate for these purposes based on her clinical experience, research and continuing expertise in the field (personal communication, March 11, 1998).

The video shown to the comparison group was selected for several reasons. First, the research design called for a comparison video that was relatively benign avoiding prejudicial images of or references to female body sizes and shapes. Preferably, it would be of relative interest to a college student population. Finally, because English classes were targeted as sources for subjects, the video entitled "Peter Elbow: On writing", was secured for use as the comparison video. The presentation focuses on a monologue by Peter Elbow, a professor of English at the University of Massachusetts, regarding college student writing. The video contains only the image of the speaker's head and shoulders. Thirty minutes of the video were selected for their relevance to students.

The study's proposed research design allowed for showing an intact group of volunteers the same video. The choice of treatment or comparison video was alternated

sequentially with each successive group. The resulting lack of randomness will also be discussed later as a factor limiting the generalizability of the results.

Immediately after viewing the video, all subjects were given another packet of documents to be completed. This packet contained the posttest measures including: a) the Figure Rating Scale (see Appendix E), b) the EDI-2 questionnaire (Garner, 1991) and c) the EDI-2 answer sheet (Garner, 1991). Subjects were asked to complete each of these documents and return them to the researcher.

Only one subject reported some difficulty in completing the pretest and posttest measures in less than 30 minutes each. She was given the additional time she required to complete the measures.

Instruments

The pretest and posttest measures included two instruments: The Eating Disorder Inventory - 2 (EDI-2) by Garner (1991) and the Figure Rating Scale (Stunkard, Sorenson, & Schulsinger, 1983).

The EDI-2 is a self-report instrument measuring psychological constructs usually related to the eating disorders anorexia nervosa and bulimia nervosa. The instrument is primarily focused on individual attitudes, thoughts and feelings related to weight, body size and

eating. The EDI-2 is designed for ages 12 and over and can be administered to individuals or groups. The approximate length of time required to respond to the 91 items on the inventory is 20 minutes.

The EDI-2 may be scored by hand or computer. The scoring system is based on the responses "always", "usually", "often", "sometimes", "rarely" or "never." These responses are given a score of zero to three with three assigned to the responses most weighted in the "symptomatic" direction (Garner, 1991).

The original Eating Disorder Inventory first published in 1984 contained 8 subscales - Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Introceptive Awareness and Maturity Fears. The EDI-2, published in 1991 introduced 3 new provisional subscales - Asceticism, Impulse Regulation and Social Insecurity.

Although this instrument is more commonly used as a tool to assist in the diagnosis of eating disorders, it also provides extensive normative data for nonpatient populations. The population these normative data were derived from were almost exclusively female college students between the ages of 18 and 25 years of age.

For the purposes of this study, certain subscales of

EDI-2 are more relevant than others. However, the test's author cautions against administering subscales in isolation. Independently administered, the subscales lose validity and reliability. Therefore the inventory will be administered in its entirety.

The subscales of most relevance to the topic of body image are:

1. Drive for Thinness - the author cites others' support for this drive as the "core psychopathology" of eating disorders (Garner, 1991, p. 5) and a potential risk factor for development of eating disorders in "nonpatient populations" (Garner, 1991, p. 35). High scores on this subscale mean "the individual is reporting concerns related to eating and body shape" (Garner, 1991, p. 8).
2. Body Dissatisfaction - identified as "endemic to young women in Western culture", this subscale targets "dissatisfaction with the overall shape and size" of one's body (Garner, 1991, p. 5).
3. Perfectionism - this subscale addresses one's level of expectations of excellence and achievement as well as fear of disappointing others.
4. Asceticism - this provisional subscale uniquely parallels topics 4, 5 and 6 in the video taped presentation (see Appendix G) as it is intended to measure self-denial,

control of bodily urges and suffering as vehicles of feeling more virtuous, strong or even spiritually superior.

5. Maturity Fears - the reluctance to "grow up", targeted by this scale, is linked to a desire to maintain a child like body. (This desire is encouraged by the media according to the video-taped presentation.)

The remaining subscales, Bulimia, Ineffectiveness, Interpersonal Distrust, Introceptive Awareness, Impulse Regulation and Social Insecurity may be less directly linked to the subject matter of this study. However, it was presumed the inclusion of these results might yield interesting findings when the data are analyzed.

The following reports of reliability and validity for the EDI-2 are given for the original eight subscales. The internal reliability coefficients arrived at in two sets of data are .80 to .90 for eating disorder samples. Two-thirds of coefficients for the nonpatient (or female comparison) samples were above .80 (Garner, 1991, p. 23).

The test - retest reliability was measured at one week, three weeks and one year for nonpatient samples. The one week and three week data showed coefficients of .67 to .95. The 1 year follow-up reliabilities ranged from .41 to .75, coefficients the author termed "reassuringly consistent" (Garner, 1991, p. 23).

Reviewers cited in the Mental Measurements Yearbook comment that the data for the EDI-2's validity is extensive and its content, criterion, convergent and discriminant validity are appropriate (Conoley & Impara, 1994). The author states that the high degree of internal consistency is indicative of content or face validity. Evidence for criterion related validity is the test's success in discriminating between eating disordered samples and the nonpatient sample. Correlations of patient's scores with clinicians evaluations of the patient were found to be significant at the .001 level. This finding suggests concurrent validity.

The following speaks to the EDI-2's construct validity. Significance levels at the .001 levels were found when the EDI-2 was correlated with two other instruments related to eating disorders. In addition, correlations between the EDI-2 and other psychometric instruments (measuring constructs such as locus of control and depression) produced significantly positive correlations. This finding led one reviewer to conclude, "... the constructs measured by the EDI involve to some degree other personality characteristics not unique to eating disorders" (Ash in Conoley & Impara, 1994, p. 334).

The author of the instrument summarizes, "Most

importantly, many of the findings from the original validation studies have been replicated and extended by subsequent research conducted in a wide range of different settings." (Garner, 1991, p. 37). He also reminds the reader that further research is needed regarding the provisional subscales.

The main limitation of the EDI-2 as cited by the Mental Measurements Yearbook and the EDI's author is its self-report status. Garner points to the advantages of self-report measures as standardized, economical and less time intensive than structured interviews. This study assumes subjectivity and bias on the part of the subjects.

The second instrument, the Figure Rating Scale, yields a perceptual self-report of individual body image rather than the attitudinal and behavioral measures contained in the EDI-2. Researchers in the field of body image discuss the importance of addressing both the perceptual and attitudinal components separately in order to arrive at a more revealing and comprehensive measure (Cash & Szymanski, 1995; Gardner, R., 1996; Monteath & McCabe, 1997; J. K. Thompson, Penner, & Altabe, 1990).

Figure silhouettes or contour drawings, such as the Figure Rating Scale, are described as "the most popular tools for assessing this subjective element of body-image

disturbance" (M. A. Thompson & Gray, 1995). Numerous contour drawing scales exist. The Figure Rating Scale is the most widely used scale to date. First originated for a study of Danish adoptees (Stunkard, et al., 1983), it was later popularized by researchers Fallon and Rozin (1985) who utilized it in a landmark study to determine which body sizes are considered attractive to the opposite sex. The scale has been utilized in scores of research projects and in clinical settings.

The scale consists of drawings of nine figures ranging from extremely thin to extremely overweight. Subjects were asked to select the figure they perceive to be most like their current body size (FEEL) and the figure most like their desired size (IDEAL). These values are assigned a corresponding numerical value. The difference in the two values represents an estimation of dissatisfaction with their current body size. In the literature this is often referred to as the Feel Minus Ideal Discrepancy and is considered a widely accepted index of dissatisfaction levels (J. K. Thompson, 1996).

The scale can be completed in two minutes or less. It is scored manually.

Measures of validity and internal consistency are not available because the rating is a subjective and

individualized self-report. In a sample of 204 female undergraduates, J. K. Thompson and Altabe (1991) documented the following 2 week test-retest scores: .71 for Ideal and .83 for Feel.

CHAPTER III

RESULTS

Treatment of Data

In order to prepare the raw data for statistical treatment, the answers to the EDI-2 pretests and posttests were converted into subscale scores. These subscale scores were then converted into percentile scores for those subjects who requested the results of their questionnaires. In addition, the subjects' responses to the Figure Rating Scale pretest and posttest were calculated. This raw data along with the demographic information completed by each subject were entered into the SPSS data file.

Statistical Analyses

Prior to testing the proposed hypotheses, the data were organized so that characteristics of the sample could be analyzed. Tables 1 and 2 present basic demographic information regarding the entire sample. Analysis of other descriptive statistics revealed the following observations.

First, responses to the Figure Rating Scale (FRS) were examined. Figure 1 illustrates the total sample means for Ideal 1 - the initial measure of how subjects wish to look,

and Feel 1 - the measure of how subjects "feel" they look.

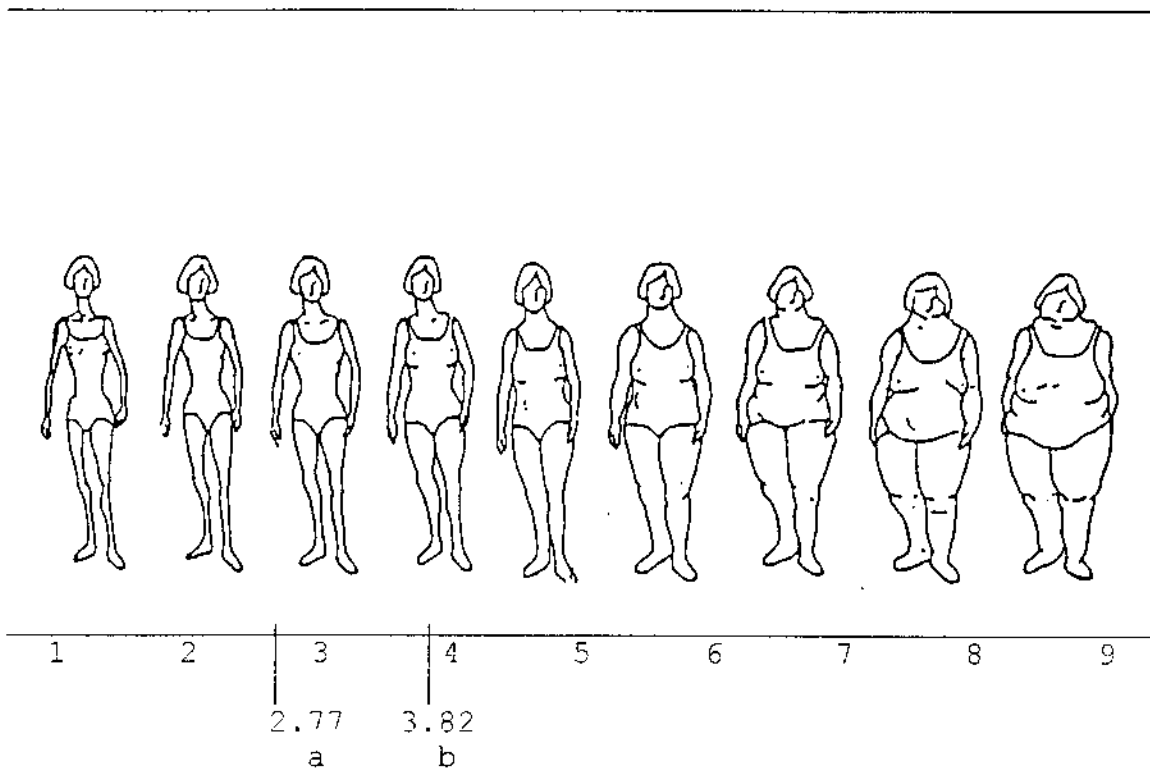


Figure 1. Original responses of all subjects (n = 165) to Figure Scale questions. Point a represents the mean Ideal (what you most want to look like) score. Point b represents the mean Feel (what you feel you look like) score. Drawings from "Use of the Danish Adoption Register for the Study of Obesity and Thinness," (p. 119), by A. J. Stunkard, T. Sorenson, and F. Schulsinger in The Genetics of Neurological and Psychiatric Disorders by S. S. Kety, L. P. Rowland, R. L. Sidman and S. W. Matthysse (Eds.), 1983, New York: Raven Press. Reprinted and used with permission of the author.

As noted previously, the discrepancy between Feel and Ideal scores (Feel minus Ideal) is generally accepted as an indication of body size dissatisfaction. Larger Feel minus Ideal scores reflect more body dissatisfaction. Table 3 contains the original estimates of the Feel minus Ideal scores for the total sample, as well as the scores for ethnicity and universities.

Responses from the demographic questionnaire revealed the mean weight of all female project participants was 135.56 pounds. Subjects' mean reported height was five feet, five inches. A commonly utilized index of overweight, the Body Mass Index (BMI) was first presented by Keyes, Fidanza, Karvonen, Kimura and Taylor in 1972. This index is obtained by dividing one's weight in kilograms by one's height in meters squared. The index applies to both males and females. BMI scores of 24 and under are not considered overweight. Scores of 25 to 29 on the BMI are considered overweight. An index score over 30 is deemed obese. The mean BMI for all participants was calculated to be 22.4. Table 4 presents the correlations of BMI scores and the Figure Rating Scale discrepancy score (Feel minus Ideal).

The demographic data organized in Table 5 summarize patterns in subjects' dieting behavior. For the purposes of this study, dieting was defined as restricting food intake.

Table 3

Differences in Original Mean Scores for Various Groups

Group	<u>n</u>	Feel-Ideal ^a	Ideal ^b	BD ^c	DT ^d
<u>Ethnicity</u>					
African American	20	0.75	2.90	9.05	3.63
Asian	2	1.50	2.00	10.50	16.50
Caucasian	103	1.13	2.74	11.21	4.84
Hispanic	3	1.00	2.67	7.33	5.33
Native American	2	0.00	4.00	15.00	3.00
Pacific Islander	1	-1.00	4.00	7.00	0.00
<u>University</u>					
State	47	0.89	2.85	11.04	3.54
Private	91	1.13	2.66	10.82	5.60
Woman's	29	1.03	2.97	10.52	4.03
Total Sample	167	1.05	2.77	10.83	4.80

Note. ^a The score represents the difference in the size the subject FEELS they are and the subject's IDEAL size. The higher the score is, the greater body dissatisfaction is assumed. ^b The lower the Ideal score, the smaller the body size desired. ^c The higher the BD score, the greater the body dissatisfaction. ^d The higher the DT score, the greater the drive for thinness.

Table 4

Correlations of Body Mass Index and Measures of Body
Satisfaction

Original Measure	Correlation to BMI
<u>Figure Rating Scale</u>	
Feel	.657**
Ideal	.461**
Feel Minus Ideal	.407**
<u>EDI-2</u>	
Body Dissatisfaction	.443**
Drive for Thinness	.153*

Note. n = 167

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 5

Self-Reported Dieting Behaviors of All Subjects

Dieting behavior	<u>n</u>	%
<u>Most weight ever lost^a</u>		
40 to 100 pounds	12	5.5
over 30 pounds	15	9.1
over 20 pounds	34	20.0
over 15 pounds	53	31.5
over 10 pounds	80	46.1
Restricted food intake	91 ^b	54.5 ^c
Did not restrict food intake	63	37.7
Used diet supplements	40	24.0
Dieted by age 18	75	77.3

Note. ^a n = 165, percentages and n are cumulative (i.e., "over 10 pounds" also included all categories above it). ^b Three subjects responded "not applicable." ^c Six percent responded "not applicable."

Table 6 presents responses to food avoidance and smoking behavior. Table 7 reveals percentages of exercise subjects reported to be aimed at weight loss.

Table 6

Subjects Who Report Smoking in Order to Avoid Eating

Frequency	<u>n</u>	%
Never	133	79.6
Rarely	15	9.0
Sometimes	16	9.6
Often	2	1.2

Table 7

Percentage of Exercise Aimed at Weight Loss as Reported by Subjects

Frequency	<u>n</u>	%
Do exercise ^a		
100% aimed at weight loss	22	13.2
more than 75% aimed at weight loss	25	15.0
50% to 75% aimed at weight loss	38	22.8
25% to 50% aimed at weight loss	<u>21</u>	<u>12.6</u>
Subtotals	106	63.6
less than 25% aimed at weight loss	21	12.6
Do not exercise	32	19.2

Note. ^a n = 135

The EDI-2 mean pretest subscale scores for the total sample are shown in Table 8 along with the mean subscale scores of a nonpatient college female comparison group as presented in the EDI-2 test manual (Garner, 1991, p. 14).

Before analyzing the variance within groups and between groups (in order to test the hypotheses), the researcher addressed an important statistical concern. Two subscales of the EDI-2 correlated significantly with the FRS Feel minus Ideal scores (see Table 9).

As discussed previously, many researchers (Cash & Szymanski, 1995; Gardner, 1996; Monteath & McCabe, 1997; and J. K. Thompson et al., 1990) advocate the use of a perceptual measure used in combination with an attitudinal survey to assess body image satisfaction. Thus, the decision was made to use the pictorial Figure Rating Scale in addition to the EDI-2 Questionnaire. However, correlation of dependent variables called for statistical control.

To assume that two correlated dependent variables are significant implies incorrectly that the treatment variable is impacting two different characteristics. Thus, in order to maintain statistical purity, a method of equalizing this impact was needed.

Table 8

Comparison of Original Scores of Subjects in This Study and
Another Female College Group

Subscale	Subjects in this Study ^a		Comparison Group ^b	
	M	SD	M	SD
Drive for Thinness	4.8	5.8	5.5	5.5
Bulimia	1.0	2.1	1.2	1.9
Body Dissatisfaction	10.8	8.2	12.2	8.3
Ineffectiveness	2.1	3.1	2.3	3.6
Perfectionism	7.3	4.5	6.2	3.9
Interpersonal Distrust	2.3	2.8	2.0	3.1
Interoceptive Awareness	2.5	3.7	3.0	3.9
Maturity Fears	2.8	3.5	2.7	2.9
Asceticism	3.9	2.8	3.4	2.2
Impulse Regulation	2.5	3.6	2.3	3.6
Social Insecurity	3.3	3.4	3.3	3.3

Note. The higher the subscale score is, the greater the manifestation of the characteristic. ^a $n = 167$. Scores are pretest scores. ^b $n = 205$. Adapted and reproduced by special permission of Psychological Assessment Resources, Inc., 16204 North Florida Avenue, Lutz, Florida 33549, from The Eating Disorder Inventory-2, by Garner, Olmstead, Polivy, Copyright, 1984, 1991 by Psychological Assessment Resources,

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Table 9

Correlation of Original Body Dissatisfaction Measures

Measures	Body Dissatisfaction	Drive for Thinness	Feel Minus Ideal
Body Dissatisfaction	- -	.612**	.702**
Drive for Thinness		- -	.555**
Feel Minus Ideal			- -

Note. ** Correlations are significant at the 0.01 level (2-tailed).

The Roy-Bargmann stepdown analysis corrects for correlated dependent variables by testing the significance of the independent variables sequentially (Tabachnick & Fidell, 1989). Dependent variables were rated in terms of their relative importance to the hypotheses (see order presented in Table 10). As described by Tabachnick and Fidell (1989), the Roy-Bargmann stepdown operates as follows:

The highest priority DV [dependent variable] is tested in univariate ANOVA.... The rest of the DVs are tested in a series of ANCOVA's: each successive DV is tested with higher-priority DVs as covariates to see what, if

anything, it adds to the combination of DVs already tested. (p. 403)

Shown in Table 10 are the results of the univariate analysis of variance to test the first hypothesis of the study. The data (when corrected for multiple dependent variables) are presented in Table 11.

The stepdown analyses of the study's second hypothesis yielded the results shown in Tables 12 through 14. Table 12 summarizes the overall variance in the groups only (the main effect for video without partitioning for time - the pretest and posttest). Table 13 shows the main effect for time only (not partitioned for group). Finally Table 14 displays the interaction effect of pretest/posttest measures and treatment/control group membership.

Discussion

According to the results presented in Table 14, the treatment video had very little impact on the posttest scores of subjects in the treatment group when compared to the posttest scores of subjects who viewed the video unrelated to female body image. Only one provisional subscale score, Social Insecurity, showed significant improvement for subjects who were exposed to the treatment video. These results will be discussed in much greater detail later when discussing hypotheses.

Table 10

Univariate Analysis of Variance for Subjects Within the
Treatment Group

Variable	Error MS	F	Significance
Body Dissatisfaction	7.09	8.67	.004**
Feel	0.07	8.39	.005**
Ideal	0.10	2.86	.094
Drive for Thinness	2.39	2.92	.091
Bulimia	0.87	0.53	.470
Ineffectiveness	1.55	0.06	.809
Perfectionism	1.83	1.64	.204
Interpersonal Distrust	0.93	2.69	.104
Interoceptive Awareness	2.73	5.62	.020*
Maturity Fears	1.59	5.18	.025*
Asceticism	1.59	8.26	.005**
Impulse Regulation	1.25	2.84	.096
Social Insecurity	1.13	10.68	.002**

Note. $n = 88$, $df = 87$. * $p < .05$. ** $p < .01$.

Table 11

Stepdown F Analysis of Variance for Subjects Within the
Treatment Group

Variable	Error <u>df</u>	Error MS	F	Significance
Body Dissatisfaction	87	7.09	8.67	0.00**
Feel	86	0.07	5.13	0.03*
Ideal	85	0.09	1.44	0.23
Drive for Thinness	84	2.06	0.03	0.86
Bulimia	83	0.79	0.13	0.72
Ineffectiveness	82	1.15	3.07	0.08
Perfectionism	81	1.90	1.73	0.19
Interpersonal Distrust	80	0.93	3.83	0.05
Interoceptive Awareness	79	2.41	1.73	0.19
Maturity Fears	78	1.53	1.07	0.30
Asceticism	77	1.33	2.21	0.14
Impulse Regulation	76	1.20	2.44	0.12
Social Insecurity	75	0.95	5.75	0.02*

Note. n = 88. Stepdown analysis is used to control for multiple dependent variables. The variables are listed in descending order of hierarchical importance. * $p < .05$. ** $p < .01$.

Table 12

Stepdown Analysis of Variance of Treatment and ComparisonGroups Not Controlling for Time

Variable	Error MS	F	Significance
Body Dissatisfaction	130.76	3.70	0.06
Feel	1.39	0.01	0.92
Ideal	0.64	0.32	0.86
Drive for Thinness	37.20	1.60	0.21
Bulimia	5.80	0.67	0.41
Ineffectiveness	14.65	0.00	0.99
Perfectionism	38.87	1.40	0.24
Interpersonal Distrust	12.68	0.20	0.66
Interoceptive Awareness	11.40	0.52	0.47
Maturity Fears	16.66	0.73	0.40
Asceticism	8.60	0.01	0.94
Impulse Regulation	46.58	0.00	0.83
Social Insecurity	8.43	0.17	0.68

Note. n = 167. Variables are listed in descending order of importance.

Table 13

Stepdown Analysis of Variance of Pretest and Posttest Not
Controlling for Group

Variable	Error MS	F	Significance
Body Dissatisfaction	5.34	23.58	0.00**
Feel	0.06	5.99	0.02*
Ideal	0.06	1.48	0.23
Drive for Thinness	1.99	0.00	0.99
Bulimia	0.61	0.05	0.83
Ineffectiveness	1.29	0.38	0.54
Perfectionism	1.70	0.10	0.76
Interpersonal Distrust	1.05	0.62	0.43
Interoceptive Awareness	1.85	11.34	0.00**
Maturity Fears	1.53	0.92	0.34
Asceticism	1.64	6.07	0.02*
Impulse Regulation	32.73	2.68	0.10
Social Insecurity	0.82	3.37	0.07

Note. $n = 167$. Variables are listed in descending order of importance. * $p < .05$. ** $p < .01$.

Table 14

Stepdown Analysis of Variance in Treatment and Comparison
Groups and Pretest and Posttest Time

Variable	Error MS	F	Significance
Body Dissatisfaction	5.34	0.06	0.81
Feel	0.06	2.05	0.15
Ideal	0.06	0.96	0.33
Drive for Thinness	1.99	0.32	0.86
Bulimia	0.61	0.24	0.62
Ineffectiveness	1.29	9.55	0.00**
Perfectionism	1.70	2.09	0.15
Interpersonal Distrust	1.05	1.34	0.25
Interoceptive Awareness	1.85	0.77	0.38
Maturity Fears	1.53	0.28	0.60
Asceticism	1.64	0.02	0.88
Impulse Regulation	32.73	0.77	0.38
Social Insecurity	0.82	5.59	0.02*

Note. $n = 167$. Variables are listed in descending order of importance. * $p < .05$. ** $p < .01$.

The descriptive characteristics of this sample support findings noted in previous studies. Prominent researchers in the field of body image have documented that women's discontent with their bodies is normative rather than unusual in this culture (Cash, et al., 1986; Polivy & Herman, 1987; Williamson, et al., 1995). Several indices suggest the majority of females in this study were not satisfied with their body size even though they were not overweight.

As noted previously, the average Body Mass Index score (BMI) for this sample was 22.4, which is well below the cut-off score of 24 , the widely accepted minimum indicator of overweight. Nevertheless, as illustrated by Figure 1, the average discrepancy between each subject's originally perceived body size and their ideal body size was more than one complete figure size. From their original pretest measure responses, over one in three subjects (37%) revealed that they perceived themselves to look most like the fourth figure. Almost half of the subjects (49%) selected the third figure as their ideal size. And, 36% identified the second figure as their ideal body size.

Other sample estimates reflect trends reported in other populations studied. Table 9 shows that Drive for Thinness scores for the entire sample were highly correlated with

Body Dissatisfaction scores ($r = .612$; $p = .000$). A causal relationship or direction can not be assumed. However, the high correlation of these two measures was expected as suggested by body image literature. The strong relationship between these two factors statistically supports the notion that women's dissatisfaction with their bodies is strongly related to a desire to be thin.

Interestingly, body dissatisfaction was found to correlate somewhat ($r = .30$; $p = .000$) with the number of pounds lost. Perhaps contrary to popular thought, this indicates that the more pounds one loses, the *greater* the body dissatisfaction. This supports other researchers contentions that dieting (even if successful) often ultimately results in more frustration and poorer body image.

As seen in Table 5, over half (54%) of the entire sample acknowledged losing weight "on purpose." Fifty five percent said "yes" they had restricted their food intake in order to lose weight. Additional indications of the frequency of dieting include the following statistics describing the sample. The most frequently reported age at which subjects acknowledged they "first began to seriously restrict food intake due to concern about... body size" was 16 years old. Of 97 subjects responding to this question,

over 77% (n = 75) had seriously restricted food intake by age 18. It is a commonly agreed upon belief within the medical community that serious dieting (or restriction of food intake) is not advisable during childhood or adolescence when the body is rapidly growing and developing. The youngest age noted for beginning to seriously restrict food intake was 7 years of age. Almost one in four subjects (24%, 40 of 102 responding) admitted using diet supplements in order to lose weight.

As can also be seen in Table 5, almost half of all subjects reporting weight loss had lost ten pounds or more. And one in five subjects had lost 23 pounds or more. The average weight lost (16.45 lbs) is almost 12 percent (11.955) of the average weight (135.5 lbs). By comparison, the percentage of weight loss associated diagnostically with Anorexia Nervosa is 15% of expected body weight.

Responses to questions involving exercise behavior also yielded some interesting results (see Table 7). Of the 135 subjects who do exercise, over 63% report that 25% or more of their exercise is aimed at weight control (rather than other reasons to exercise). Over 13% said 100% of their exercise is for the purpose of controlling their weight. As one might expect, the percentage of exercise aimed at weight control was correlated with Body Dissatisfaction ($r = .36$; p

< .000).

As can be seen from Table 6, 80% of subjects denied ever smoking to avoid eating. That percentage leaves a cumulative 19.8% combined who reported "rarely," "sometimes" or "often" smoking to avoid eating.

Table 3 includes differences noted in mean scores for various groups within this sample. Observations of these differences are consistent with some of the ethnic and racial differences noted previously in the review of the literature. African American subjects reported a higher mean Ideal body size, a lower mean Drive for Thinness score, a lower Body Dissatisfaction mean score and a lower Feel minus Ideal discrepancy score than Caucasian subjects. Asian American, Hispanic American, Pacific Islander and Native American groups were comprised of three or fewer subjects.

The relationship between media exposure and female body satisfaction is a fundamental concern of this research study. As noted in the literature review, a limited number of studies have focused on this relationship, although a large number of researchers hypothesize a strong correlation. Responses to the demographic questionnaire point to some surprising correlational findings. Contrary to this researcher's expectations, the amount of television viewing was not significantly correlated to variables

indicative of body dissatisfaction. As might be predicted, the number of hours of television watched per week showed a negative correlation with percentage of exercise ($r = -.175$; $p = .040$). This may be reflective of patterns of physical inactivity. The number of TV hours was positively correlated with a higher age when restricting food intake ($r = .233$; $p = .024$). In addition, when analyzing the means of the sample, subjects who responded "yes" to restricting their food intake (or dieting) on average watched one less hour of television than those subjects who said they did not diet.

Women in this sample who reported using diet supplements on average watched 2.2 hours more of television per week than women who reported they do not use diet supplements. Although, this observation resulted from an examination of the differences in means, the results were not statistically significant.

These findings suggest that exposure to commercial television is not significantly related to dieting behavior (see Table 15). Perhaps, television food advertising is more persuasive and/or pervasive than diet product advertising.

However, the significant correlations found when examining the impact of fashion magazines were far more dramatic than those related to TV watching. On the demographic questionnaire, subjects were asked what, if any,

Table 15

Comparison of Means of TV Watching Hours and DietingBehavior

Behavior	Hours Spent Watching TV		
	<u>n</u>	<u>M</u>	<u>SD</u>
<u>Lost Weight "On Purpose"</u>			
Yes	86	11.20	11.93
No	71	10.73	11.13
Mean Difference		0.47	
<u>Restricted Food to Lose Weight</u>			
Yes	88	10.01	9.81
No	63	11.38	13.38
Mean Difference		-1.36	
<u>Used Diet Supplements</u>			
Yes	39	12.86	15.43
No	60	10.63	9.53
Mean Difference		2.23	

fashion magazines they read; approximately how many fashion magazines per month they read; and approximately how many hours per month they spent reading these magazines.

As seen in Table 16, the number of hours spent watching TV was not significantly correlated with either the number

Table 16

Correlations Between Fashion Magazine Exposure and Other
Subject Characteristics

Characteristic	Magazine Hours ^a		# of Magazines ^b	
	Pearson	F	Pearson	F
Age	-.077	.454	-.182	.020*
Body Mass Index	-.142	.167	-.191	.014*
Drive for Thinness 1 ^c	.112	.273	.208	.008**
Drive for Thinness 2 ^d	.113	.270	.213	.006**
Interpersonal Distrust 1	.208	.041*	.036	.650
Ideal 1	-.227	.026*	-.275	.000**
Ideal 2	-.080	.439	-.268	.001**
Maturity Fears 1	.027	.795	.161	.040*
TV Hours	.095	.362	.142	.071
Weight	-.064	.533	-.189	.015*

Note. ^a $n = 97$. ^b $n = 164$. ^c 1 represents pretest. ^d 2

represents posttest. * $p < .05$. ** $p < .01$.

of hours spent reading magazines or the number of magazines read per month. This finding suggests that active consumers of one media genre are not necessarily active consumers of another medium. One might then expect differences in consumer characteristics. These differences appear to be

supported by the following findings.

The number of fashion magazines read per month was found to be positively correlated ($r = .21$) with subjects' Drive for Thinness scores. The number of fashion magazines read per month was negatively correlated ($r = -.28$; $p < .01$) with Ideal body size preferences. The number of hours spent reading fashion magazines was negatively correlated ($r = -.23$; $p < .05$) with subjects' original (pretest) Ideal body size selection. In addition, the number of magazines read per month was negatively correlated with subjects' weight and Body Mass Index ($r = -.20$; $p < .05$).

A significant difference in group means was found when comparing subjects who lost weight "on purpose" with those who had not ($p = .01$). Those subjects who acknowledged losing weight intentionally read *more* fashion magazines each month than subjects who reported they have not lost weight intentionally. The relationship between the *hours* spent reading magazines could be said to be marginally related to losing weight intentionally ($p = .06$).

The following observations were not found to be statistically significant, and therefore, not generalizable. However, the comparison of means suggest some trends in this sample (see Table 17). Subjects who acknowledged restricting their food intake in order to lose weight on average spent

over one-half hour more per month reading fashion magazines and read an average of .21 more magazines per month than subjects who did not restrict their food intake in order to lose weight. And finally, subjects who reported they used diet supplements spent an average of 1.3 more hours a month reading fashion magazines and read an average of .62 more magazines per month than subjects who did not use diet supplements.

Which fashion magazines did subjects acknowledge reading? Almost one in three (32%, n = 54) read *Cosmopolitan* magazine. One in four (26%, n = 43) read *Glamour* and one in ten (11%, n = 18) read *Vogue* each month.

As with all correlations, causation of these relationships can not be inferred. These results do not reveal whether women with a lower BMI and/or a greater desire to be thin chose to invest more attention and time in reading fashion magazines or if they developed a greater desire to be thin and/or a lower BMI as a result of exposure to fashion magazines.

If fashion magazines do help to create a drive for thinness or reinforce an existing desire to be thin, then it would seem true that the three magazines mentioned would exert a substantial influence on a large number of women.

Interestingly, in this sample, the number of magazines read per month was negatively correlated with the subject's

Table 17

Comparison of Means of Fashion Magazine Exposure and Dieting Behavior

Behavior	Magazine Hours			# of Magazines		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
<u>Lost Weight "On Purpose"</u>						
Yes	57	2.45	.461	88	1.65	1.67
No	37	1.51	.177	69	1.09	1.05
Mean Difference		0.94			0.56*	
<u>Restricted Food to Lose Weight</u>						
Yes	54	2.38	.474	89	1.54	1.42
No	35	1.81	.257	62	1.33	1.39
Mean Difference		.057			0.21	
<u>Used Diet Supplements</u>						
Yes	24	3.04	4.83	39	1.95	2.06
No	35	1.74	1.68	61	1.33	1.27
Mean Difference		1.30			0.62	

Note. * $p = .012$.

age ($r = -.182$, $p < .05$), as seen in Table 15. This inverse relationship might be influenced by this sample's

characteristic of college enrollment. If, however, this observation is true for other general populations, important implications for adolescent females may exist.

Turning from examination of the sample characteristics to the impact of the treatment, the acceptance or rejection of the study's hypotheses will now be discussed.

The study's first hypothesis predicted a significant improvement in body image satisfaction for subjects who were exposed to an educational video (the treatment video). This improvement was expected to be reflected in lower posttest scores when compared to pretest scores of the same subjects. Univariate analysis of variance in scores within the treatment group yielded significant improvement in six characteristics including Body Dissatisfaction, Feel, Interoceptive Awareness, Maturity Fears, Asceticism and Social Insecurity (see Table 10).

However, when controlling for correlated dependent variables, only three measures showed significant improvement - Body Dissatisfaction, Feel and Social Insecurity. These significant improvements lead to a rejection of the null hypothesis - there is no difference in pretest and posttest scores of the subjects in the treatment group. Strictly speaking, accepting the directional hypothesis means acknowledging there was significant

improvement in the posttest scores when compared to the pretest scores of the group who viewed the treatment video.

These results must, however, be viewed in light of comparison to the group that did not view the treatment video. The second hypothesis of the study stated that the differences in the treatment group's pretest and posttest scores would be more significant than the differences in pretest and posttest scores of the comparison group.

In order to examine the differences in groups, the Roy Bargmann Stepdown F analysis was applied to the interaction of groups and time. Table 12 displays the variance of the treatment and comparison groups not controlling for pretest and posttest scores. In this analysis (controlling for correlated dependent variables), no statistically significant difference was revealed between all scores of the treatment group compared to all scores of the comparison group. However, the overall Body Dissatisfaction scores of the treatment group were higher than the Body Dissatisfaction scores of the comparison group at the marginally significant level ($p = .056$). In other words, averaging across the pretest and posttest scores, the treatment group subjects were less satisfied with their bodies than the comparison group. This difference may have influenced the ultimate results of the study. Nevertheless,

the significance level of $p < .05$ will be relied upon as a cut-off score for determination of significance. It is therefore assumed that the difference in Body Dissatisfaction scores between groups was not significant.

Table 13 presents the results of the analysis of variance for time only. The Stepdown F analysis revealed significant improvement in all subjects posttest scores on the following measures - Body Dissatisfaction, Feel, Interoceptive Awareness and Asceticism. The multivariate tests of significance showed the significance of F to be $p = .000$. However, when considering the interaction effect of time and treatment shown in Table 14, the variance in pretest and posttest scores implies a testing effect. In other words, both groups demonstrated improvement in posttest scores regardless of the video viewed. This observation strongly suggests that subjects were sensitized to the posttest by the pretest. The improvement in scores was most likely caused by repeated exposure to the testing instrument and/or "hypothesis guessing" (Heppner, Kivlighan, and Wampold, 1992) on the part of the participants in the comparison group. Hypothesis guessing is defined as subjects attempting to determine what the goal of the research may be and then trying "to either comply or rebel against these presumed expectations" (Heppner, et al., p. 62). This and

other threats to the internal validity of the study will be discussed further when addressing limitations.

Examination of the variances of treatment and time combined is the most comprehensive analysis of the interaction of variables (see Table 14). This multivariate analysis yielded an overall significance score of $p = .038$. Again, however, statistically controlled, only two measures showed significant change in posttest scores when comparing groups. The first score showing significance (Ineffectiveness) actually reflects an improvement in a posttest measure of the comparison group. The Ineffectiveness scores of subjects who viewed the comparison video improved significantly. This improvement could easily be understood when considering the content of the comparison video. The video's speaker leads students systematically through a series of suggestions to reduce writer's block, to improve college student writing and to apply this improvement to all college curricula. The video is intended to reduce students feelings of ineffectiveness related to these basic skills. The speaker even shares his transitions from failure as a college student to a highly successful professor and author.

The only other variable demonstrating significant variance in group and time (as seen in Table 14) is the

provisional subscale Social Insecurity. Before proceeding to discuss the possible explanations for this significant improvement, the decision to accept or reject the second hypothesis will be addressed. The corresponding null hypothesis is that there is no difference in the overall variance of the treatment group's pretest and posttest scores when compared to the comparison group. As has been explained, only two variables yielded significant differences and only one of those reflected improvement as a result of the treatment. Therefore, as the overall difference is not significant, the null is accepted. It is concluded that viewing the treatment video did NOT result in significant improvement in the posttest scores of subjects who were exposed to it, when compared to subjects who were exposed to another video. The explanation for this lack of significant differences could be attributed to any of the overall limitations discussed later.

Or perhaps, viewing the treatment video heightened subjects' awareness of this topic and, in turn, their scores on the posttest were somewhat elevated. As most clinicians are aware, it is not uncommon for a treatment to increase sensitivity to an issue or to trigger feelings that may have otherwise not emerged. In other words, negative reactions may escalate immediately after an issue is spotlighted and

prior to any intervention having a chance to result in improvement.

Or perhaps, the explanation for lack of significant improvement is related to the question of whether body image is an enduring, static trait or a fluid, situationally specific state. Cusumano and J. K. Thompson (1997) concluded that internalization of media influences, not one time exposure, is the primary dynamic mediating the impact of the media on an individual's body image, eating behavior and self-esteem. The authors found that internalization (awareness and acceptance) of the media's standard of thinness accounted for significant variance in body image measures. Repeated exposure is more likely to result in internalization of external standards.

Heinberg, J. K. Thompson and Stormer (1995) found that internalization accounted for 64% of the variance in body image and eating dysfunction measures. Also in 1996, Stormer and J. K. Thompson found that internalization of media messages was a significant contributor to body image problems. The authors found that an important mechanism of this internalization is the individual's comparison of media images to herself.

If much of the strength of the internalization process involves repeated exposure to standards, then logic would

imply that 30 minutes of educational information would do little to intervene on an individual's attitudes. This argument would be particularly strong if body image is an enduring and internalized trait or set of traits.

However, many studies, such as those cited in the literature review, found immediate (although negative) changes in body image after exposure to thin media images (Irving, 1990; Lintott, 1993; Slade, 1994; Stice, et al., 1994; Tiggemann & Pickering, 1996; and Turner, et al., 1997). Haimovitz, Lansky and O'Reilly (1993) argued for situational specificity of body image when they found body satisfaction varied significantly across situations. Regarding this question, Pruzinsky and Cash (1990) encourage attention to the complex interaction of variables in a given context rather than a fixed or static model.

Consistent with an attention to the interaction of variables, one might consider the visual content of the treatment video. This researcher counted well over 104 visual pictures (in the 30 minute video) portraying examples of the media's unrealistic presentation of women. Perhaps, some subjects attended more to the visual images than the spoken content of the video. Any potential improvements in body image attitudes and perceptions may have been offset by the repeated thin pictorials. If this phenomena were true,

it would be consistent with the studies noted in which body image was more negative after exposure to visual stimuli.

In light of this discussion, a compelling question exists - why is Social Insecurity the subscale shown by the data to evidence significant improvement from the treatment? This is an intriguing question, especially since the video addresses many other characteristics directly, including body dissatisfaction, bulimia, drive for thinness, asceticism, maturity rears, ineffectiveness and interoceptive awareness.

First, a few properties of the Social Insecurity subscale will be noted. This measure is one of three provisional subscales of the EDI-2. The three subscales were added to the original eight. The supporting data are not as extensive for the provisional scales as compared to the original eight. However, the EDI-2 manual reports internal reliability estimates of .80 for the Social Insecurity subscale when tested on samples of 107 and 205 subjects (Garner, 1991, p. 24).

In addition, for subjects in this study, the Social Insecurity subscale correlated significantly with more variables than any other measures (see Table 18). The numerous strong correlations also suggest that this subscale may be a very meaningful measure.

The Social Insecurity subscale measures the degree of tension or comfort with experiences in group situations. For example, one subscale item states, "People understand my real problems."

As the video ends, the presenter urges women and men to "support" each other regarding body image; to avoid discussing diets and thinness; to stop asking "Have you lost weight?"; and to dialogue in a supportive fashion about wellness and healthy activities. As she is presenting these statements, there are no media images. The presenter's urging for support of one another may have been reassuring to subjects. Perhaps, rather than intervening on enduring perceptions and beliefs about one's body, the video's

Table 18

Correlations of the Social Insecurity Posttest Scores with
Other Measures

Variable ^a	Pearson Correlation	Significance
Asceticism 1	.249	.001**
Asceticism 2	.180	.020*
Bulimia 1	.271	.000**
Bulimia 2	.333	.000**
Body Dissatisfaction 1	.292	.000**
Body Dissatisfaction 2	.278	.000**
Drive for Thinness 1	.164	.035*
Drive for Thinness 2	.201	.010**
Feel 1	.166	.033*
Ineffectiveness 1	.601	.000**
Ineffectiveness 2	.624	.000**
Interoceptive Awareness 1	.447	.000**
Interoceptive Awareness 2	.457	.000**
Interpersonal Distrust 1	.627	.000**
Interpersonal Distrust 2	.633	.000**
Impulse Regulation 1	.405	.000**
Impulse Regulation 2	.470	.000**
Maturity Fears 1	.263	.001**

Table 18 continued

Maturity Fears 2	.201	.010*
Perfectionism 1	.356	.000**
Perfectionism 2	.325	.000**
Exercise Aimed at Weight Loss	.200	.018*

Note. ^a 1 = pretest, 2 = posttest. * p < .05. ** p < .01.

message helped subjects to become aware that body image issues are a universal concern for women. Perhaps, the idea of support from others for these concerns reduced subjects' feelings of social insecurity.

Yalom (1985) writes that many people believe "they are unique in their wretchedness" (p. 7). Interestingly, when Yalom wrote about the curative power of group universality, he used the example of bulimic patients' need for self-disclosure and their "great relief at discovering they are not alone and that others share the same dilemmas..." (p. 9).

Limitations

In addition to restrictions previously discussed, the sample is limited in its generalizability due to lack of random selection. College students were selected primarily for their availability. They are not representative of all samples. For example, perhaps college students have less

discretionary time to watch television or read magazines.

For ethical reasons, students could not be mandated to participate. Therefore, all participants were volunteers. All subjects were allowed to discontinue participation at any time. No reasons were given by those subjects who chose not to complete their participation.

Furthermore, most students reported to their classrooms in order to participate. Others came to pre-arranged sites on campus. Those who reported to pre-arranged sites could have differed significantly in levels of motivation. Also, rigid control of the testing environment was not possible. This difference resulted in some uncontrolled conditions, such as size of the video screen.

All of the classes approached were pre-existing static groups. The character of each intact group (or class) may have been influenced by factors such as the personality of the professor. Those faculty who agreed to allow their students to participate were possibly more supportive of the nature of the research than other faculty. Students may have selected the class due to the professor's ideology, style or philosophy.

The researcher alternately showed the treatment video and comparison video to the intact groups. Ideally, subjects in each classroom would be randomly selected to view a

particular video.

Subjects may have anticipated the nature of the research from the content of the instruments. Subjects could have adjusted their responses in order to protect their privacy, please the experimenter, contradict the premise of the study or for a number of other reasons.

The dependent variables were entirely self-reported measures. This means the responses depend on the subjects' honesty. Stice and Shaw (1994) present support for the accuracy of self-reported weight. All responses, however, were inherently subjective.

The Figure Rating Scale is the most commonly used instrument of its kind. However, Gardner, Friedman and Jackson (1998) critiqued the FRS for its coarseness of scale, restriction of range and spuriously high test-retest reliability. These authors warned that subjects could easily remember which figure they chose previously.

J. K. Thompson, Penner and Altabe in Cash and Pruzinsky (1990) addressed the issue of the researcher's gender as an issue that deserves attention. Also, the researcher's expectancies and even her body size may have innately influenced subjects. This researcher, at the time the research was conducted, had a BMI of 25, falling into the overweight range of the index. This factor could easily

influence subjects' perceptions and attitudes of their own body size.

Similarly, the content of the treatment video is inherently influenced by the video presenter's background, research and opinions. The video's content was reviewed by another clinician. It also appeared to be relevant to the study's focus and to the variables measured in this study (see Appendix F).

The limitations of a single (one-time) exposure have been discussed. Mahoney in Cash and Pruzinsky (1990) wrote "... the timeline for enduring changes in identity and body image, in my opinion, extend across a scale of years" (p. 327).

Recommendations for Further Research

Certainly an issue with the potential to impact the emotional well being and physical health of so many individuals deserves continued investigation. If one's body is a primary vehicle for experiencing and enjoying life, then body dissatisfaction has far reaching implications other than and including eating disorders.

Logic suggests that individuals who have limited regard for their bodies may be more predisposed to unhealthy lifestyle practices such as laxative abuse, use of dangerous

diet pills, smoking, over-exercise and/or avoidance of exercise. Women have been heard to insist that they will not engage in recreational group activities (such as swimming, team sports or exercise classes) until they lose weight. This researcher has often witnessed female clients refuse to seek medical care because they dread being weighed at their physician's office.

More investigation is needed regarding the relationship of body dysphoria (dissatisfaction) and sexual dysfunction. It appears, anecdotally, that many couples are negatively impacted by one or both partner's poor body esteem and resulting sexual inhibition, avoidance of sexuality and/or lack of sexual enjoyment. Little research appears to be available in this area, with the exception of literature regarding oncology, physical disfigurement and reconstructive surgery (such as studies with mastectomy patients). Further research aimed at improving sexual spontaneity and enjoyment (by addressing body dissatisfaction) could greatly contribute to the field of marriage and family therapy.

Researchers may be in the early stages of examining the complex relationship of body image and sociocultural influences. As has been found in the review of the literature, the preponderance of researchers in this field

point to the media as a causal and sustaining influence on women's normative discontent with their bodies. Much more empirical investigation is needed to test these assumptions.

Follow-up and longitudinal studies are called for in order to investigate repeated exposure to media. Research limited to observations at one point in time does not allow for analyzing changes in behavior.

Many researchers including T. F. Cash and R. M. Gardner have continued to pursue more discriminating attitudinal and perceptual measures of body image. Attempts to develop more sophisticated instrumentation must continue (such as J. K. Thompson's development of indices of sociocultural influences).

Populations at risk for body image concerns should continue to be closely monitored. For example, this study found a negative correlation with age and Drive for Thinness ($r = -.20; p < .05$). Age was also negatively correlated ($r = -.20; p < .05$) with the number of fashion magazines read per month (as seen in Table 15). Continued research examining adolescents' vulnerability to media messages is critical. Some investigators in the field suspect that male adolescents are increasingly susceptible to the preference for a more muscular physique. As noted earlier, males' attempts to become more muscular may lead to dangerous

practices, such as steroid use (Blouin & Goldfield, 1995; Drewnowski, et al., 1995; and Raudenbush & Zellner, 1997).

More research could also be directed toward populations not exposed to a great deal of media influences. Studies of cultural differences support implications of mass media's influence on body image.

Perhaps, researchers in the field of body image could collaborate more with specialists in other disciplines. For example, one finding in this study suggests that higher levels of body dissatisfaction are correlated with greater percentages of exercise aimed at weight control ($r = .39$; $p < .01$). Perhaps motivational psychologists and exercise physiologists could help to explore whether greater body satisfaction would lead to more consistent, sustained or enjoyable exercise. These professionals have been utilized to help individuals become more aware of their bodies' movement and expressiveness. Becoming more aware of one's body in these ways is thought to decrease dissociative tendencies by increasing one's physical consciousness.

Possibly, researchers need to turn more extensively to the field of advertising itself as the video's presenter, J. Kilbourne, has done. Certainly, there exists a continually growing body of demographic data describing relationships such as personal dynamics and susceptibility to various

types of advertising.

At least two major advertisers are attempting to promote positive media messages at the time of this study. Nike shoes and Kellogg's cereals currently present two page magazine advertisements encouraging women to accept individual differences in body types and to direct their energies toward a healthy lifestyle rather than extreme practices geared toward thinness.

Further research could empirically test whether repeated exposure to more positive role models encourages improved body image. If, as Gandee's 1994 article suggests, the most prominent female fashion models have numerous body image disturbances, then the average female may feel little permission to accept her imperfections. Rather than acknowledging that "super models" may be encouraged to scrutinize their bodies, some women seem to believe they must do the same and, in some instances, far more negatively.

Some of this study's demographic data strongly suggest that fashion magazines are far more influential than television on the college female population. Other studies (Brenner & Cunningham, 1992; Cusumano & J. K. Thompson, 1997; Garner, et al., 1980; Snow & Harris, 1986 and Wiseman, et al., 1992) have categorized and coded sizes and shapes of

female images presented in women's magazines. More research is indicated in order to continue to monitor patterns of images presented. With the exception of the study by Cusumano and J. K. Thompson (1997), the analyses noted above were completed in the decade of the 1980's or before.

Many authors have reviewed the media's historical influence on female body image (Garner, et al., 1980; Mazur, 1986; and Silverstein, Perdue, et al., 1986). Heinberg et al. (1995) summarized others' findings, "... feminine beauty ideals have been modeled for centuries, however historically, figures of art were romanticized as unattainable, while today's media blur the boundaries between glorified figure and reality." The authors continued, "... the influence of television and magazines is especially problematic because models in these media are seen as realistic representations of actual people rather than carefully manipulated images" (p. 82). This type of awareness is what the treatment video's presenter seeks to improve.

In her video, Kilbourne calls for increased media literacy. Stice and Shaw (1994) recommend "School based prevention efforts... aimed at reducing the internalization of the thin-ideal stereotype, as well as promoting body satisfaction" (p. 304). Recent studies at three universities

found significant improvement in body satisfaction and increased motivation for healthy lifestyle choices after student involvement in educational wellness programs (Backels & Lindsley, 1997; Koff & Bauman, 1997; and Rabak-Wagener, Eickhoff-Shemek, & Kelly-Vance, 1998). Backels and Lindsley (1997) concluded that "students felt less threatened by a class than by a therapy or support group" (p. 670).

Such educational units (comprising six weeks or more) are probably capable of effecting more positive change than any one time intervention. Rabak-Wagener, et al. (1998) utilized the same video as used in this study as a part of their successful health education class targeted at conscious consumerism of fashion advertising. If social insecurity is a characteristic amenable to immediate change, as this study suggests, it would seem to suggest the benefits of including some form of social skills training in such an educational package.

Finally, this study's finding regarding the Social Insecurity subscale may imply the need to more closely examine the cultural norms related to women's unspoken rules regarding body image. Further research could spotlight women's communication patterns around the topics of body size, weight and eating. Whereas, female conversations about

dieting and a desire to be thinner seem extremely common, comments affirming one's body size and shape are so rare as to be culturally taboo. This researcher observed that although almost one-third of all subjects requested the confidential results of their participation, only four of 167 female participants asked any questions or made any comments in the group settings when they were asked for feedback and time was allowed for questions and discussion.

Males do not typically appear to share this reticence to discuss positive aspects of their bodies and appetites. Why does the media appear to present men with far fewer images to match? Perhaps more open communication within the male subculture assists with less vulnerability to external influences.

Perhaps cultural mandates against women supporting each other's positive body images create heightened susceptibility to external messages. Could it be that women internalize sociocultural standards more intensely in the absence of open communication and support?

Perhaps even positive media messages regarding women's body images (such as the treatment video or Nike's and Kellogg's advertising) will be discounted and/or ignored until women as a group give themselves and each other permission to change communication norms and cultural

standards related to body image.

Conclusions

In summary, analysis of the differences in a group exposed to a video (regarding female body image) and a comparison group did not yield significant differences in scores, with the exception of a provisional subscale measuring social insecurity. One explanation for the lack of improvement for those exposed to the treatment video involves the phenomenon of increased exposure to an issue resulting in increased discomfort or sensitivity. Perhaps, the attention to the issue of body image elevated the posttest scores thus counteracting benefits derived from the video.

Another explanation for the lack of improvement in the treatment group may be related to the visual content of the video. Perhaps, subjects attended more to the images of extremely thin models presented rather than absorbing the educational text. The lack of improved scores also supports the notion that body image is an enduring, static trait rather than situationally specific. Perhaps, clinicians need to carefully evaluate expectations for intervening quickly or easily in this domain. A client's set of beliefs regarding her own body size are often very guarded.

The author hypothesizes that social insecurity was reduced due to the relief found in addressing this seemingly taboo subject more openly in a group setting.

Interesting relationships were revealed by examination of the demographic data. Consistent with the body of literature, the average subject wished to be thinner although she was not overweight. Also consistent with other findings were cultural differences in body image perceptions and feelings.

Disconcerting patterns of food restriction and avoidance supported previous research results. For example, "serious" dieting prior to age 18, which can involve health risks for a body that is still maturing, was acknowledged by 77% of the subjects. The average weight lost was almost 12% of the average body weight. Almost one in five subjects stated they had smoked cigarettes to avoid eating. And a majority of subjects exercise to lose weight rather than to improve health or for recreation.

Subjects' exposure to fashion magazines was found to correlate with Drive for Thinness scores and Ideal body size. The amount of time spent exposed to fashion magazines was found to have an inverse relationship with subjects' weight. Subjects who "lost weight intentionally" also read more fashion magazines per month. The younger the subjects,

the more magazines they reportedly read. Almost one in three subjects read the same magazine, *Cosmopolitan*, suggestive of its pervasive influence.

Recommendations for further research include studying the impact of poor body image on all areas of health and happiness (such as sexual satisfaction). The author suggests further collaboration among body image researchers and other professions including exercise physiologists and market researchers.

More research is needed to empirically test the nature of the relationship between the media (particularly fashion magazines) and women's body image. Wellness education programs and eating disorder prevention programs can encourage media literacy, social skills, body acceptance and consciousness, nutritionally sound eating habits and more open, positive communication among females regarding their body sizes and shapes. Improving acceptance of one's body has the potential to enhance one's overall capacity to achieve healthy physical and emotional goals.

APPENDIX A

CONSENT TO SERVE AS A SUBJECT IN RESEARCH

Consent to Serve as a Subject in Research

Your signature at the bottom of this page signifies that you are consenting to participate in a doctoral research project conducted by Carla Garber under the direction of Dr. Robert Berg of the Department of Counseling, Development and Higher Education at the University of North Texas. This research project is targeted at exploring the impact of print, television and advertising media on women's attitudes and perceptions of their body size.

Your involvement should take between 60 and 90 minutes. You will be asked to answer a questionnaire and circle figures on a drawing. You will then be asked to view a video and then again complete a questionnaire and circle figures on a drawing. After these steps are completed, you and / or your group may elect to participate in a discussion on the topic. If you did not view the video on female body image and would like to do so, the video will be available for that purpose.

This project is not expected to involve any hazards or risks to you. All reasonable safeguards will be taken to minimize potential harm. Each participant's responses will be kept strictly confidential. You will place a code number, not your name, on the data that will be collected. Results of the research will be reported in writing, however, no individuals will be identified. Any information that suggests an individual's identity will be destroyed. Those who are interested in the results of the research may also request follow-up information.

All participants will receive resource information at the conclusion of their participation. This information will include references to counselors, books, organizations and other resources related to the topic. It is hoped that participation in the study will only benefit the participants by educating them regarding this topic. If any questions or concerns arise related to the subject matter, the project director will direct the participant to appropriate resources or referrals.

Your participation in this research is voluntary. You must be at least 18 years old. You are free to withdraw your consent and discontinue participation at any time without penalty, prejudice, or negative effects upon your grades or standing as a student. If at any time you have questions about this research, you may contact Ms. Garber at 817-732-5290, 4200 S. Hulen, Suite 600, Fort Worth, Texas 76109.

I have read and understand the above information. I agree to participate in this research based on the conditions stated. I have retained one copy of this form.

Signature _____ Date _____

Print Name _____

Witness* _____ Date _____

*Witness signature is required whenever the capacity of the subject to understand the description of the project and its associated risks is in question or required by the TCU Committee on Safeguards..

THIS PROJECT HAS BEEN REVIEWED BY THE UNIVERSITY OF NORTH TEXAS COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (Contact Sandra L Terrell, Chair, Institutional Review Board 940-565-3940) AND BY THE TCU COMMITTEE ON SAFEGUARDS IN HUMAN RESEARCH (Contact Jan Fox, Coordinator of Research and Sponsored Projects, 817-257-6518 or Carol Pope, Chair, Committee on Safeguards in Human Subjects 817-257-6573).

APPENDIX B
RESOURCES FOR RESEARCH PARTICIPANTS

Female Body Image

Additional resources for Research Participants

BOOKS

- Berry, C. R. 1993. Your body never lies. Pagemill Press: Berkeley, CA.
- Cash, T. F. 1995. What do you see when you look in the mirror. Bantom Books: New York.
- Cash, T. F., 1997. The body image workbook: An 8-step program for learning to like your looks. New Harbinger Publications: Oakland, CA.
- Dixon, M. 1996. Love the body you were born with: A ten step workbook for women. Perigee: New York.
- Hutchinson, M. G. 1985. Transforming body image: Learning to love the body you have. Crossing Press: Freedom, CA.
- Sward, S. N. 1995. You are more than what you weigh: Improve your self-esteem no matter what your weight. Wholesome: Denver.

ORGANIZATIONS

National Association of Anorexia Nervosa and Associated Disorders (A.N.A.D.)
Box 7
Highland Park, Illinois 60035
847-831-3438

COUNSELING CENTERS AND RESOURCE GROUPS

University of North Texas

UNT Student Counseling
and Testing
Student Union, Rm. 321
940-565-2741

Child and Family
Resource Clinic
Matthews Hall Annex
940-565-2066

Counseling and Human
Development Center
East End of Stovall Hall
940-565-2970

"Managing Eating and
Nutrition" Program
UNT Health Center
Contact Peggy Fogel
940-565-2787

UNT Women's Studies
General Academic
Building #302
Contact Dr. Claire Sahlin
940-565-2098

Texas Christian University

TCU Student Counseling
Center
Barracks Building on
Cockrell
817-257-7863

TCU Women's Studies
Contact Kay Higgins
817-257-7855

Texas Wesleyan University

TWU Counseling and Career Development
Contact Janet Payne
817-531-4859

Denton County

Denton County 24 Hour Crisis Hotline
940-387-5555

Denton County Mental Health and Mental Retardation
2519 Scripture
Denton, Texas
940-381-5000

Tarrant County

Tarrant County MHMR
1501 Merrimac Circle
Fort Worth, Texas 76107
Client Crisis Hotline
817-335-3022

Family Services of Tarrant County
1424 Hemphill Street
Fort Worth, Texas 76011
Crisis Intervention
817-927-8884

PRIVATE PRACTICE THERAPISTS

Anetta Ramsay, Ph.D., N.C.C.
414 South Elm
Denton, Texas 76201
940-382-5688

Mary Orndorff, A.C.P.
1315 Brookside Drive., Suite D-2
Hurst, Texas 76053
817-282-8244

Emily Haeussler, Registered
Dietitian
6040 Camp Bowie Boulevard
Fort Worth, Texas 76116
817-377-3880

APPENDIX C
STANDARD INFORMATION FOR
RECRUITMENT OF SUBJECTS

Standardized Information
to Recruit Volunteers

Hello, my name is Carla Garber. I am a doctoral student at the University of North Texas in the Department of Counseling, Development and Higher Education. I am seeking student volunteers to participate in a doctoral research project. Your one time participation would take 60 to 90 minutes. You would be asked to answer questionnaires, circle figures on a drawing and watch a 30 minute video. Your responses would be kept strictly confidential. You would place a code number, not your name, on the questionnaires. Your identity would not be revealed even to me. Your code number would be known to you in the event you would like the results of your questionnaire.

In order not to influence the results of the study, I am not revealing in advance to subjects the nature of the research topic. Immediately after you conclude your participation, I will explain the research, answer questions and give each participant resources for more information or assistance on the topic. I appreciate your consideration of this matter.

APPENDIX D
DEMOGRAPHIC QUESTIONNAIRE

Demographic Sheet
Please fill out completely.
Your answers are strictly confidential.

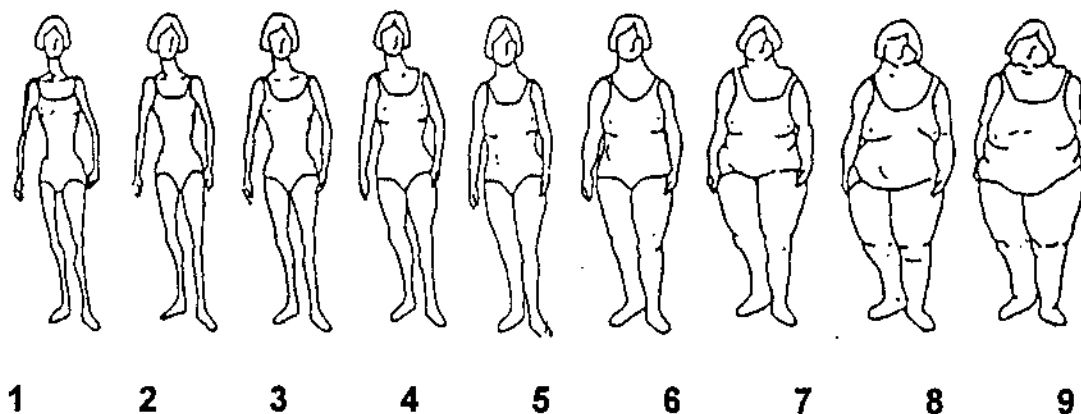
1. Code number: _____ (The last 6 digits of you SS# or, if you prefer, your birth month, date and year, e.g., 061478)
2. Classification (check one):
 Freshman Sophomore Junior Senior Graduate
3. Age: _____
4. Gender: Female Male
5. Ethnic Origin (optional):

6. Marital Status (Check one): Married Single Divorced
7. Approximate number of hours per week you watch television: _____ hours per week.
8. Type of television you watch most often (check only one):
 Situation Comedies (e.g., "Friends") News Music Channels or Shows
 Sports Talk Shows Other
 (specify) _____
9. Approximate number of fashion magazines (e.g., Glamour, Vogue, Cosmopolitan, GQ) you look at per month: _____
 Name of magazine(s): _____
 Approximate time in hours spent looking at this/these magazines: _____ hours per month.
10. Current weight: _____ pounds.
11. Height: _____ feet, _____ inches
12. What is approximately the most weight you have ever lost: _____ pounds (0 if none).
13. Did you lose this weight on purpose? Yes No Not applicable
14. Did you lose it by restricting your food intake? Yes No Not applicable
 If yes, how old were you the very first time you began seriously restricting your food intake due to concern about your body size or weight? _____ years old.
 If yes, did you use diet supplements? Yes No
15. Do you exercise? Yes No
 If yes, what percentage of your exercise is aimed at controlling your weight? 0%
 less than 25% 25% to 50% 50% to 75% more than 75% 100%
16. Do you ever smoke to avoid eating (check one)?
 Never Rarely Sometimes Often Almost always

APPENDIX E
FEMALE FIGURE RATING SCALES

Code # _____

Date _____

Figure Rating Scale¹

Look at the people above. Then without thinking about it too much, please answer the following questions using the number under the figure to indicate your choice.

- Which numbered figure is closest to what you feel you look like?
Please place the number of the figure you chose here: _____
- Which numbered figure is closest to what you most want to look like (or your ideal figure)? Please place the number of the figure you chose here: _____

¹Note. Drawings from "Use of the Danish Adoption Register for the Study of Obesity and Thinness" (p. 119), by A. J. Stunkard, T. Sorenson, and F. Schulsinger in The Genetics of Neurological and Psychiatric Disorders by S. S. Kety, L. P. Rowland, R. L. Sidman and S. W. Matthysse (Eds.), 1983, New York: Raven Press. Reprinted and used with permission of the author.

APPENDIX F
STANDARDIZED INSTRUCTIONS TO SUBJECTS

Standardized Instructions to Subjects

Thank you for agreeing to participate in this research!

I am now passing out paperwork for you to complete and return to me. You may use pen or pencil on all paperwork. We will now go over the instructions.

On the top of your packet, you should see 2 copies of a form titled "Consent to Serve as a Subject in Research". If you do not have 2 copies, please let me know now. Please read the document. If you agree to participate, sign one copy to return to me and keep one for your files. (Allow time to read and sign form.)¹ Please pass your signed copy of the consent form forward.

In order to strictly protect your identity, you will now choose a code number consisting of the last six digits of your Social Security # - drop the first 3 numbers, or, if you prefer, your six digit birth month, date and year - e.g., 020199. You will place your code number on all paperwork. You may want to write the code number you selected on the your copy of the Consent Form that you are keeping. You will refer to this number if you should want the results of your questionnaire in the future.

Under the Consent forms, you'll see a demographic sheet. Please fill this out completely and remember all of your answers will be kept strictly confidential. Your identity will not be revealed even to me. (Allow time to complete.)

The next document in the packet should be a Figure Rating Scale. Without thinking about it too much, please place your answer to the two questions in the two spaces. (Allow time to complete.)

Next in the packet you'll see the "EDI-2 Answer Sheet". Please mark through "name" and instead write your code number.

Below the Answer Sheet, you'll see a questionnaire. Please read the instructions carefully. All of your answers to these questions will be recorded on the EDI-2 Answer Sheet.

This questionnaire is a measure of attitudes, feelings and behaviors related to eating and other areas in general. There are no right or wrong answers and no time limit although most people find they can easily complete it in 15-20 minutes. It is a standardized instrument that has been completed by thousands of people. It is important to answer all of the items. On the answer sheet, circle the letter that corresponds to your best answer. For example, if your answer to a question is "Often", you will circle "O" on the answer sheet next to the number corresponding to the question. If you need to change an answer, make an "X" through it and circle your preferred answer.²

¹ Reminders to the researcher are in parentheses.

² These instructions regarding the EDI-2 are included based on recommendations in the test manual.

Please see that there are 7 items on the 3rd page. Again, all of your answers are confidential. Your identity would not be revealed even to me, unless you request the results of your questionnaire. When you are through, turn you answer sheet over. Then raise your hand and I will collect your documents. (Allow time to complete.)

(When all subjects are finished completing the paperwork, collect the demographic sheet, figure rating scale, EDI-2 questionnaire and answer sheet. Remind subjects to keep their copy of the consent form.)

Now, you'll be watching the following video. (Start video. Adjust lights, etc. When video has ended, pass out EDI-2 questionnaire, answer sheet and figure rating scale.)

Again, on all of the following paperwork, you will use your code number, not your name. Your code number was the last six digits of your social security number or your birth date, month and year. Please enter your code number on the Figure Rating Scale on the top of the packet you just received. Then, without thinking about it too much, please place your answer to the two questions in the two spaces. (Allow time to complete.)

Next, in the packet you'll see the EDI-2 Answer Sheet. Please mark through name and instead write the code number you selected.

Below the answer sheet, you'll see a questionnaire. Please read the instructions carefully. All of your answers to these questions will be recorded on the EDI-2 Answer Sheet. There are no right or wrong answers and no time limit. It is important to answer all of the items. On the answer sheet, circle the letter that corresponds to your best answer. If you want to change an answer, make an "X" through the incorrect letter and circle your preferred answer. (Allow time to complete and turn in all paperwork.)

(After subjects have completed and turned in all paperwork, give them the handout "Female Body Image: Additional Resources for Research Participants".) Thank you very much for your participation in this research project. The research was designed to investigate an aspect of the media's influence on female body image - the way women perceive their bodies and how satisfied they are with their bodies. Some researchers believe that the media exerts significant influence on women's body image. This project may or may not support this suggestion.

If you viewed the video on college writing and would like to view the video related to female body image and the media, please let me know. If you would like a summary of the results of the study or the results of your questionnaires, please sign this sheet. (Show request sheet.)

Thank you again for your participation! If you have any questions or concerns, please do not hesitate to contact me at the numbers listed on the copy of the consent form you have retained.

APPENDIX G
DESCRIPTION OF TREATMENT VIDEO

Slim Hopes: Advertising & the Obsession with Thinness

Presenter and author Jean Kilbourne has spent 25 years researching the media's portrayal of women's images. This video presentation is 30 minutes in length and addresses the following seven topics.

1. **Impossible beauty.** The ideal female body presented by the media is often impossible to achieve. This ideal of "absolute flawlessness" is often retouched, air-brushed or a product of computerized enhancement.
2. **The waif look.** The desired female body type often presented as very tall, genetically thin, broad shouldered, "narrow hiped" and "long legged" represents only 5% of the female population.
3. **Constructed bodies.** The body type of super models described in #2 above is naturally small breasted. Plastic surgery to enhance breast size results in loss of sensation and pleasure. The pear shaped body can be considered medically healthy. However, the media portrays a pear shaped body as undesirable. Body doubles are often used in the media to substitute for "stars" and super models.
4. **Food and sex.** The food industry sometimes presents food as sexual; as a way to alter one's mood; and a means of dealing with disappointments and other emotional needs. Food is often alluded to as a substitute for sex. Women's bodies are sometimes compared to food.
5. **Food and control.** The "good girl" is one who keeps her appetite controlled. A woman is "bad" if she breaks her diet. The media contributes to the phenomena that women often do not view appetite as a source of pleasure and satisfaction. Child-like images of women contribute to images of fragility and powerlessness.
6. **The weight loss industry.** The \$33 billion weight loss industry presents food as "sinful temptation" and diet products as "salvation." Prejudice against overweight women is perpetuated. Dangerous attitudes such as "You can never be too rich or too thin" are presented as normal. Cigarettes are encouraged as a means of avoiding food and thus staying "slim" and "light." Despite this pressure to diet, evidence shows most diets are ineffective leading to increased weight gain.
7. **Freeing imaginations.** The obsession with thinness is framed as a "major public health issue" that "cuts to the very heart of women's energy, power and self-esteem." Being "media literate", the presenter advises, will help to view body image more objectively.

APPENDIX H
DESCRIPTION OF COMPARISON VIDEO

Peter Elbow: On Writing

“Among all contemporary specialists and researchers in the field of writing, Peter Elbow stands out as the one who is most attentive to the needs of student writers. In this video, Peter presents his most helpful ideas with a clarity and directedness that makes them readily accessible for all students and teachers of writing.” - Sheridan Blau, President, *National Council of Teachers of English*

Peter Elbow is Professor of English at the University of Massachusetts at Amherst. He is the author of numerous books on writing including *What is English?*; *Voice and Writing (Edited)*; *Writing with Power: Techniques for Mastering the Writing Process*; *Embracing Contraries: Explorations in Learning and Teaching*; *Oppositions in Chaucer*; *Writing without Teachers*. Widely acknowledged for elevating the study and teaching of writing to new heights, Peter Elbow is much in demand as a workshop leader. Teachers of writing across the country rely on his books as inspirational and valuable resources for their students.

For the first time on video, Peter Elbow, one of the country's preeminent teachers of writing, talks directly to students about the process of writing. Beginning with his own early difficulties with writing as a college student, Elbow provides insights into how one can work through writing problems. Professor Elbow explains the role of feedback and the importance of readers and listeners to good writing. Full of detailed instruction and specific skills to aid in writing, this video guides its audience from the initial stages of freewriting to the final stages of the revising process.

Useful for students and teachers alike, *Peter Elbow on Writing* will demystify the writing process while presenting its viewers with countless gems of encouragement and support with which to approach their writing anew.

The video includes the following sections:

- Private Writing
- Shared Writing
- Non-evaluative Feedback
- Evaluative Feedback
- Revising
- Voice and Power in Writing
- Writing Across the Curriculum
- Grammar and Spelling
- Mediums for Writing
- Writing for Life

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