

The Relationship Between Media Consumption and Eating Disorders

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This study examined the relationship between college women's media use and two sets of variables (disordered-eating symptomatology and a set of related variables, including body dissatisfaction and drive for thinness) and assessed the relationship between college men's media use and their endorsement of thinness for themselves and for women. We expected to find consumption of thinness-depicting and thinness-promoting (TDP) media related to disordered eating and thinness endorsement, with the social learning process of modeling accounting for the relationships. For women, media use predicted disordered-eating symptomatology, drive for thinness, body dissatisfaction, and ineffectiveness. For men, media use predicted endorsement of personal thinness and dieting and select attitudes in favor of thinness and dieting for women. Magazine reading was a more consistent predictor than television viewing. Several relationships remained significant when interest in fitness and dieting as media topics was partialled out of the analyses. Exposure to TDP media appears to be associated with a subsequent increase in eating disorder symptomatology. Selective exposure to these media based on initial interest in fitness and dieting as media topics is not a viable alternative explanation for this association.

Anorexia nervosa and bulimia nervosa threaten the physical and mental health of an alarming number of women today. Anorexia nervosa is a potentially life-threatening disorder characterized by the refusal to eat enough to maintain body weight over a minimal norm for age and height, as well as an intense fear of gaining weight, body image disturbances, and eventual amenorrhea (temporary cessation of menstruation). Bulimia nervosa is a related disorder

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characterized by a pattern of bingeing (eating large quantities of food in discrete intervals of time) followed by attempts to compensate for the excessive caloric intake by vomiting, using laxatives, severe restrictive dieting or fasting, or overexercising. The American Psychiatric Association (1994) estimates that among eating-disordered individuals, women outnumber men 10 to 1, and the prevalence of disordered eating is anywhere from 0.5% to 3% of the general population. Anywhere from 4% to 22% of college-age females report engaging in anorexic or bulimic behavior (Collins, Kreisberg, Pertschuk, & Fager, 1982; Pyle, Neumann, Halvorson, & Mitchell, 1990; Thompson & Schwartz, 1982).

Despite increased medical attention, media coverage, and public recognition, the cluster of factors contributing to the development of anorexia and bulimia remains inadequately specified. The four major categories of risk factors that have been theoretically associated with disordered eating—biological, psychological, familial, and sociocultural—are conceptually disparate. White (1992) suggested that these risk factors collectively set the stage for the development of disordered eating, but researchers disagree about which set carries the most weight, and for whom. Despite this disagreement, there is consensus that the reported prevalence of disordered eating has risen steadily over the past 30 years, and disordered eating has begun to filter down to groups other than its initial victims: young, white, upper middle-class females (American Psychiatric Association, 1994; Dolan, 1989; Schwartz, Thompson, & Johnson, 1982; Stoutjesdyk & Jevne, 1993). Changes in sociocultural norms throughout the past 30 years suggest that the sociocultural set of risk factors may have been especially important in effecting this reported rise in prevalence. The purpose of this study was to examine the relationship between an important component of the sociocultural set of risk factors—the mass media—and disordered eating among college students.

Influence of the Mass Media

The mass media may operate as important influences on disordered eating through their impact on the values, norms, and aesthetic standards embraced by modern U.S. society. Researchers in the fields of communication and eating disorders have long suspected that the media play a significant role in transmitting thinness-oriented norms and values. Garfinkel and Garner (1982), two pioneers in the study of disordered eating, described this role: “The media have capitalized upon and promoted this image (of thinness) and through popular programming have portrayed the successful and beautiful protagonists as thin. Thinness has thus become associated with self-control and success” (p. 145). Historical trends, content analyses, and effects studies all suggest that media trends may indeed be linked to the idealization of thinness and, thus, to the development of eating disorders in media consumers.

Historical trends. The highest reported prevalence of disordered eating occurred during the 1920s and 1980s, the two periods during which the “ideal woman” was thinnest in U.S. history (Boskind-White & White, 1983). According to Mazur (1986), who tracked U.S. trends in feminine beauty through the

20th century and matched these trends to female disorders prevailing during the same periods, a sizable minority of women have overadapted to each beauty trend, thus accounting for the prevalence of disorders such as anorexia and bulimia when the slim female form has been in fashion.

Changes in eating disorder epidemiology over the past 30 years appear to mirror changes in mass media representations of women throughout the same time span. The figure of the female sex symbol trimmed down dramatically during this time (Chernin, 1981), and popular publishing found a profitable niche in marketing the thinness ideal. One of the best-selling books of the early 1980s was *The Beverly Hills Diet* (Mazel, 1981), a popular guide to weight loss. In a critique of this book, Wooley and Wooley (1982) claimed that *The Beverly Hills Diet* is filled with erroneous dietary information and dangerous diet tips, such as using large quantities of alcohol or fruit as purgative agents.

Gagnard (1986) reported a significant increase in thin models in popular-magazine advertisements from 1950 to 1984, which reached a high of 46% in the 1980s. A frequently cited study by Garner, Garfinkel, Schwartz, and Thompson (1980) reported a significant decrease in the body measurements and weights of *Playboy* centerfolds and Miss America Pageant contestants from 1959 to 1978. These authors calculated correlations between year and percentage of expected weight based on height to assess the strength of the downward trend in weight over time. These analyses revealed that pageant contestants' weight decreased sharply and significantly each year, and for most of the years, pageant winners weighed significantly less than other contestants. By 1978, however, the average normal weight of U.S. women under age 30 had actually increased by 5 to 6 pounds. The same study also reported a concurrent and substantial increase in the number of diet articles in popular women's magazines, from a yearly mean of 17.1 for the 1960s to a yearly mean of 29.6 for the 1970s.

An update of the Garner et al. (1980) study by Wiseman, Gray, Mosimann, and Ahrens (1990) reported that this slimming trend continued from 1979 to 1988. These authors reported that 69% of the *Playboy* centerfolds and 60% of the pageant contestants studied weighed at least 15% less than expected (as suggested by actuarial tables). This is noteworthy because being at least 15% below one's expected body weight is considered symptomatic of anorexia nervosa (American Psychiatric Association, 1994). At the same time, the number of dieting and exercise articles in popular women's magazines increased year by year during the period of study, whereas the normal weight range of American women and the reported prevalence of eating disorders in the United States both continued to rise.

Content analyses. In addition to historical trends, several content analyses have revealed television's increasing preoccupation with beauty, thinness, and food (Garner et al., 1980; Silverstein, Perdue, Peterson, & Kelly, 1986; Toro, Cervera, & Pérez, 1988; Wiseman et al., 1990). A multimedia content analysis by Silverstein et al. (1986) reported that the body shape standard in television is significantly slimmer for women than for men. In this study, two indepen-

dent coders rated 69% of female characters and only 17% of male characters in a sample as thin. Women's magazines featured significantly more messages to stay slim than men's magazines, and the bust-to-waist ratio of popular movie actresses decreased significantly during the 20 years preceding the study, representing a move toward a slimmer, less curvaceous figure.

Klassen, Wauer, and Cassel (1990), who studied food advertisements aimed at women, found an increasing trend for food advertisers to incorporate weight-loss claims in magazine ads for their products from 1960 to 1987. In addition, Andersen and DiDomenico (1992) found that a sample of popular women's magazines contained approximately 10 times as many dieting advertisements and articles as a similar sample of men's magazines; this ratio matches that proposed by Stropp (1984) and Bemis (1978) as representative of the difference in the prevalence of eating disorders between females and males. Andersen and DiDomenico (1992) suggest that there is a "dose-response" relationship between media content that emphasizes the ideal slim figure and the incidence of eating disorders in the dominant female target audience, such that greater exposure to such media content is associated with greater levels of disordered eating.

Effects studies. Very little empirical evidence has been produced to show that exposure to media images of thinness leads directly to disordered eating. To date, only Stice, Schupak-Neuberg, Shaw, and Stein (1994) have attempted to explore this link. These authors tested a structural equation model involving media exposure as an exogenous variable, gender-role endorsement, ideal-body stereotype internalization, and body dissatisfaction as mediating variables, and eating disorder symptomatology as the final criterion variable in a sample of female college undergraduates. The path coefficient for the direct link from media exposure to eating disorder symptomatology was significant. In addition, media exposure was found to be indirectly related to eating disorder symptomatology through gender-role endorsement, ideal-body stereotype internalization, and body dissatisfaction. A limitation of this study is that Stice and his associates did not distinguish between thinness-depicting media and other media. However, in a related study, Stice and Shaw (1994) found significant links between exposure to thin female magazine models and bulimic symptomatology in a sample of female college undergraduates.

Although there is presently no other research examining the impact of the mass media on eating disorders per se, there is evidence that adolescent girls' images of their own bodies are influenced by the mass media's portrayal of ideal body types (Freedman, 1984). Experimental research of immediate, short-term effects produced by television beauty advertisements (Tan, 1977) suggests that exposure of adolescent females to such ads cultivates significantly greater estimates of the importance of sex appeal and beauty than exposure to neutral ads. Meyers and Biocca (1992) found that exposure to advertising depicting thin and nonthin bodies had immediate effects on college women's estimations of their own bodies. Moreover, Irving (1990) found that exposure of bulimic patients to thin models resulted in decreased self-esteem and increased dissat-

isfaction with weight. Body image, estimations of the importance of physical appearance, and self-esteem all have been proposed to play important roles in the development of eating disorders (Garner & Garfinkel, 1985).

Although the preceding findings collectively present a compelling argument for the connection between media exposure and eating disorders, there is a major shortcoming in the research conducted to date. Specifically, no theory has yet been offered to account for the observed relationships. The overarching goal of this paper was, therefore, to examine the relationship between media exposure and eating disorder symptomatology within the theoretical framework of social learning theory.

Social Learning Theory

One interpretation of the preceding collection of studies and observations is that the mass media operate as transmitters of cultural ideals, including that of a slim female physique. It is difficult to accept as completely spurious the simultaneous trends of the increasingly thin body standard portrayed in the mass media and the increasing reported prevalence of eating disorders. Garner and Garfinkel (1980) commented: "Although it may appear superficial to ascribe to cultural ideals a role in the development of anorexia nervosa, the potential impact of the media in establishing identificatory role models cannot be overemphasized" (p. 652).

The phrase *identificatory role models* suggests a potentially important theoretical mediator of the mass media's effects. The process of modeling, as explicated in social learning theory (Bandura, 1977), provides a theoretical means by which young women may acquire the ideal of a thin body, the motivation to engage in extreme dieting behavior, and instructions on how to do so from the mass media. Two components within the social learning model, prevalence and incentives, provide an explanation of how dieting behaviors may be socially learned from the mass media. Prevalence is defined as the relative frequency of an event; other things being equal, the more prevalent an event is (relative to the total pool of events available for observation), the more likely it is to be modeled (Bandura, 1977). Television and magazines contain an abundance of diet-related images, advertisements, and thin-bodied models and characters (Silverstein et al., 1986). According to social learning theory, as images of thinness and dieting prevail in the mass media, modeling of dieting behaviors should also prevail. Incentives, in contrast, are defined as enticements to perform modeled behaviors. External incentives motivate modeled behavior on the basis of anticipated reward and social acceptance; vicarious incentives are based on observations of others' experiences, in real life or through some medium such as television (Bandura, 1977). Both types of incentives help make the modeling of delayed-reward behaviors (such as dieting to lose weight) more feasible. If an actor on television is perceived to be rewarded for and satisfied with her lean physique, the observer may feel that she, too, will achieve reward and satisfaction by losing weight.

Given the proposition that modeling of restrained eating behaviors from media sources should be directly linked to enactment of restrained eating

behaviors, the issue of medium arises. Content analyses have shown that characters in television drama are portrayed eating very little, and when they are shown consuming anything, it is disproportionately alcoholic (Pendleton, Smith, & Roberts, 1991; Wallack, Breed, & de Foe, 1985). Women, in particular, have been portrayed eating less frequently than men (Terre, Drabman, & Speer, 1991). If the typical television viewer were exposed only to dramatic presentations during the typical television-viewing situation, restrained eating should be the predominantly modeled eating behavior. The typical television-viewing situation does not, however, involve exposure only to dramatic presentations; advertisements comprise a substantial fraction of television's offerings. Contrary to the findings on television drama, analyses of advertisements have shown that people are portrayed eating fattening junk foods with alarming regularity. For example, a study by Jeffrey, McLellarn, and Fox (1982) revealed that the average American child sees over 11,000 television advertisements for low-nutrition, fattening junk foods each year. Thus, the portrayal of indulgent eating in television advertisements may serve to dampen the modeling effects of restrained eating from dramatic television presentations.

Magazines, in contrast, should not be subject to this dampening effect to the same extent as television. Although women's magazines do contain food advertisements, they also contain an abundance of articles detailing how to attain slimness through restrained eating. In short, women's magazines provide the dieting instructions that may be left out or drowned out by television's competing messages. Thus, if social learning through modeling is one of the ways acquisition of the slim ideal and restrained eating are learned, then overall consumption of women's magazines should be more closely related to disordered-eating symptomatology than overall consumption of television fare.

Delineation of Variables

In this study we explored the relationship between mass media use and women's disordered-eating attitudes and behaviors through an examination of the link between media exposure variables and psychological variables theoretically related to disordered eating. The media exposure variables were quantity of media use, measured as hours of television viewed and issues of magazines read; and content of media use, assessed by the television shows viewed and magazine genres read. Television content was categorized according to body type of main characters; magazine content was categorized according to the degree of magazines' emphases on thinness and fitness. The term *thinness-depicting and thinness-promoting* (TDP) media is thus used to refer to television programs with primarily thin main characters and magazine genres that emphasize thin models and dieting behavior. The extent of disordered eating and variables that have been theoretically linked to disordered eating (body dissatisfaction, drive for thinness, perfectionism, and ineffectiveness) were measured by two previously validated scales.

We recognized at the outset of this project that an obvious explanation for any link between media use and eating-disordered attitudes and behaviors could be one of selective exposure to specific media content based on interest

in that content. People who are initially high in eating disorder symptomatology and thinness endorsement are likely to expose themselves selectively to media content focusing on dieting and thinness. Although certain content types such as fitness and fashion magazines contain an abundance of articles and images related to dieting and thinness, there is no guarantee that a person who selectively exposes herself to these magazine genres is actually reading them out of interest in dieting and thinness as media topics. We determined that, for the purposes of this study, selective exposure should be operationally defined as interest in specific media topics, rather than mere exposure to genres that typically feature content referencing these topics. Respondents' interest in fitness and dieting as media topics was measured in this study to estimate the role of this interest in augmenting the relationship between the media use variables and the disordered-eating variables. Finally, in an attempt to begin investigating men's involvement in the relationship between mass media and eating disorders, this study explored men's patterns of media consumption and their attitudes toward thinness and dieting for themselves and for women.

Media Exposure Predictions

Based on the previous research and the social learning mechanisms outlined above, one overarching prediction for women was advanced: Exposure to media, especially TDP media, should be positively associated with eating disorders. Derived from this first prediction was the initial hypothesis:

H1: Television and magazine consumption, especially TDP television and magazines, will be positively associated with eating disorder symptomatology.

Media consumption is equated in this paper with television viewing and magazine reading. Due to the combined effects of medium characteristics and the social learning processes previously outlined, it is proposed that magazine consumption should be more strongly related to restrained eating, and thus to eating disorders, than television consumption. Thus, for the above and further hypotheses, the connection between magazine consumption and eating disorder symptomatology is expected to be stronger and more consistent than that between television consumption and eating disorder symptomatology.

Predictions for Variables Related to Disordered Eating

Body dissatisfaction, drive for thinness, perfectionism, and ineffectiveness are psychological phenomena strongly associated with eating disorders, whereas anorexia and bulimia are the behavioral manifestations of the psychological underpinnings of disordered eating. In attempting to relate these variables to media use and disordered eating, it is important to consider the temporal relationship that one expects to find between the variables, based on disordered-eating theory.

Stice et al. (1994) tested the possibility of an indirect relationship between media exposure and disordered eating, mediated by body dissatisfaction. Al-

though this mediational link was found to be significant, there are two problems with assuming that body dissatisfaction (or, for that matter, other disordered-eating variables) actually mediates the link between media exposure and disordered eating. The first problem concerns theory. There is presently no theoretical argument nor empirical evidence to be found within the body of eating disorder literature supporting the notion that body dissatisfaction or the other related variables actually precede the formation of disordered eating. Body dissatisfaction, drive for thinness, perfectionism, and ineffectiveness are all theoretically delineated as dimensions of disordered eating (Garner, Olmstead, & Polivy, 1984); that is, these psychological phenomena are proposed to exist concurrently with disordered eating as part and parcel of the affliction. In addition, theorists of structural equation modeling warn against the use of structural equation models as proof of causality, especially with nonexperimental data (e.g., Joreskog, 1993). Therefore, the findings of Stice et al. should not be used to override the theoretical considerations outlined above. The second problem with treating the disorder-related variables as mediators concerns scale construction. The scales used by Stice and his associates to measure body dissatisfaction and disordered eating contain redundant items, most likely because the multidimensional inventory containing the body dissatisfaction scale was developed from the older disordered-eating scale. Treating body dissatisfaction and order-related variables as mediators thus creates the methodological problem of predictor-criterion overlap.

For these reasons, we take the position that body dissatisfaction, drive for thinness, perfectionism, ineffectiveness, anorexia, and bulimia are related to disordered eating, not because they precede disordered eating temporally, but because they are theoretically and operationally dimensions of disordered eating. Therefore, in the present study, these variables are treated similarly to the overall disordered-eating variable; that is, they are each examined as criterion variables with the media exposure variables as their predictors. In this way, not only can disordered eating be described as a function of media exposure, but each of the theoretical dimensions of disordered eating can be examined as well. We turn now to a description of these dimensions and our predictions for each.

Body dissatisfaction. Dissatisfaction with one's own body shape is posited by Garner (1991) to be closely related to disordered eating. The fat-free physical ideal currently appears throughout the visual mass media, most notably in entertainment and advertising (Gagnard, 1986; Garner et al., 1980; Ogletree, Williams, Raffeld, Mason, & Fricke, 1990; Silverstein et al., 1986; Wiseman et al., 1990). Consumption of media increasingly obsessed with the perfect body and providing negatively toned depictions of nonperfect bodies may be an important factor in fueling body dissatisfaction to disordered levels. Based on this rationale, a second hypothesis was advanced:

H2: Television and magazine consumption, especially TDP television and magazines, will be positively associated with body dissatisfaction.

Drive for thinness. A strong drive for thinness was also posited by Garner (1991) to be closely related to disordered eating. Eating disorder researchers such as Bruch (1978) and Garner and Garfinkel (1980), as well as feminist writers Chernin (1981) and Orbach (1985), have expressed the conviction that thinness is a physical ideal transmitted through popular culture, one extension of which is the mass media. Representations of feminine beauty in the mass media may reinforce the desirability of extreme thinness, thereby fueling drive for thinness to a disordered level. A third hypothesis was thus advanced:

H3: Television and magazine consumption, especially TDP television and magazines, will be positively associated with drive for thinness.

Anorectics typically have a more acute drive for thinness and engage more in restrained eating than bulimics (American Psychiatric Association, 1994). Young women in general are more likely to be exposed to images of thinness and dieting in the mass media than images of bulimic behaviors such as vomiting and laxative abuse. If modeling of eating behaviors is indeed a route by which disordered eating can be learned, media representations of dieting and thinness should be more strongly related to anorexic behavior than bulimic behavior. Thus, a fourth hypothesis was advanced:

H4: Television and magazine consumption will be more strongly related to anorexic (restrained eating) behavior than to bulimic (bingeing and purging) behavior.

Perfectionism and ineffectiveness. Perfectionism and a sense of personal ineffectiveness are considered to be major risk factors in the development of eating disorders (Bruch, 1973; Swift & Wonderlich, 1988). The mass media reflect America's unanimous equation of personal perfection with a lean physique (Silverstein et al., 1986). Similarly, Garfinkel and Garner (1982) suggested that television and magazines portray thin characters as more successful and personally effective than overweight characters in a variety of endeavors. Unlike body dissatisfaction and drive for thinness, perfectionism and ineffectiveness are not conceptually related to the modeling of eating behaviors per se. Thus, although the social learning paradigm leads to no specific hypotheses about perfectionism and ineffectiveness, the relationship of these two variables to media use is worthy of examination.

Men's Attitudes and Behaviors

Men's endorsement of personal thinness and dieting. Little research has been conducted to determine the extent of disordered eating in males, presumably because eating disorders have yet to become a major medical problem among men (Pyle et al., 1990). In addition, questionnaires measuring disordered eating have yet to be geared specifically toward men. The Eating Disorders Inventory (Garner et al., 1984), though mostly neutral, contains some items that target female-specific concerns such as size of hips and thighs; to date, no

male-specific equivalent of such a test has been compiled.

This does not mean, however, that the sociocultural factors affecting female eating disorder development have no impact on the development of eating disorders in men. The factors affecting women may have already begun to affect men. Research has shown that males within microcultures valuing fitness and slimness, such as participants in certain sports, are more likely to develop eating disorders than males in the general population (Stoutjesdyk & Jevne, 1993). Content analyses have suggested that thin and fit people are overrepresented whereas obese people are underrepresented in the popular mass media. Although this trend is most marked for female media personalities, it still exists, albeit to a lesser extent, for male media personalities (Andersen & DiDomenico, 1990; Dietz, 1990). It is therefore of interest to explore the relationship between mass media exposure and men's attitudes and behaviors about dieting and thinness. A hypothesis analogous to the media exposure prediction for women was thus advanced for men:

H5: For men, television and magazine consumption, especially TDP television and magazines, will be positively associated with endorsement of personal thinness and dieting.

Men's endorsement of thinness in women. The influence of men's attitudes and behaviors about thinness may extend well beyond themselves. The vast body of literature exploring the topic of eating disorders yields additional influences that may work in tandem with the mass media to promote disordered-eating attitudes and behaviors in young women. One potential influence is men's aesthetic preference for slimness in women. Bandura and Walters (1963) explained how men's estimations of a woman's appearance may affect her social value: "A female who does not match the standards of beauty within her society evokes far fewer positive responses, especially from males, than one who possesses these socially esteemed characteristics. The slender, petite female has been highly admired in North American culture" (p. 27).

The approval of young men appears to function as a social brass ring for many young women, motivating them to become and stay thin as a method of winning male approval. If television and magazine exposure is related to women's endorsement of thinness in women, it stands to reason that television and magazine exposure is also related to men's endorsement of thinness in women, such that the more men consume these media, the more they view thinness as an important feminine characteristic. The following hypothesis reflected this expectation:

H6: For men, television and magazine consumption, especially TDP television and magazines, will be positively associated with increased endorsement of thinness in women.

As a result of the media's emphasis on women's thinness, women may be exposed to a double dose of pressure to become thin: through media mes-

sages glorifying female thinness and through pressure from men and other women who have also been exposed to these messages. Although establishing a link between mass media exposure and men's equation of thinness with feminine value does not in itself prove that the media play a significant role in the development of eating disorders in women through men, it does suggest that the media help create a social climate in which the endorsement of eating-disordered attitudes and behaviors is systematically supported by both sexes.

Method

Respondents

We offered extra course credit for completing a questionnaire to 232 female and 190 male undergraduate students from communication courses at a large midwestern university in the spring of 1994. Previously cited research on the prevalence of eating disorders had suggested that college students are at particular risk for developing eating disorders. This method of convenience sampling was deemed appropriate because this study was inferential rather than descriptive. It should be noted that the sample was extracted from a variety of communication classes, none of which was incorporating curricula that may have sensitized the students to the media's effects on disordered eating. All four class levels (first year, sophomore, junior, and senior) were approximately equally represented. The majority of respondents (90.5% of the females and 83.2% of the males) were white and middle- to upper middle-class. The sample fell well within the normal weight and height range: According to self-reports, the average female respondent was 20 years old, 5 feet 5 inches tall, and weighed 132 pounds; the average male respondent was 20 years old, 5 feet 11 inches tall, and weighed 169 pounds.

Procedure

Both female and male respondents were presented with the same five documents: a consent form, Scantron sheet, questionnaire, survey booklet, and final question sheet. After responding to the questionnaire items, respondents reported demographic characteristics and physical variables such as weight and height on the final question sheet.

Measures

Media exposure. Respondents indicated the number of hours they watched television on an average weekday, an average Saturday, and an average Sunday, as well as the frequency with which they viewed six popular television shows: *Beverly Hills 90210*, *Melrose Place*, *Seinfeld*, *Northern Exposure*, *Designing Women*, and *Roseanne*. These shows were popular among the population of interest and represented the widest possible range of body types featured in popular prime-time television entertainment. Female main characters with very thin bodies (*Beverly Hills 90210* and *Melrose Place*), average bodies (*Seinfeld* and *Northern Exposure*), and heavy bodies (*Designing Women* and *Roseanne*)

were thus equally represented. A research team classified the shows as thin, average, or heavy only if they reached 100% agreement on the proper classification of each show. Participants viewed photographs of primary female characters from each of these six shows to help them identify the shows and to serve as stimuli for measures assessing respondents' attitudes toward the characters. (Analyses conducted on these attitudinal measures are reported in Harrison, 1994.) Respondents also indicated how many issues of popular magazines they read each month in each of five categories: health and fitness, beauty and fashion, entertainment and gossip, news and current events, and men's entertainment magazines (men only). We created an overall magazine reading index by summing scores from all five categories. Because the media exposure measures consisted of single-item indexes, we did not compute alpha reliabilities for them.

Selective exposure based on interest. Selective exposure to specific types of media content based on interest in that content was measured with 10 items. The items assessed how much more or less interested respondents would be in a new television show and magazine if they covered a variety of topics, two of which were fitness and dieting. Responses ranged from 0 (much less interested) to 4 (much more interested).

Extent of disordered eating. The Eating Attitudes Test (EAT; Garner & Garfinkel, 1979) was chosen to provide an overall index of disordered eating for women. It has been deemed useful in evaluating a broad range of behaviors and attitudes found in eating disorders, particularly anorexia nervosa. Representative items from this scale include "Am preoccupied with a desire to be thinner" and "Exercise strenuously to burn off calories," with six possible frequency-based responses ranging from "never" to "always" (Garner & Garfinkel, 1979). The scoring system of the EAT yields one total score with a diagnostic cutoff point available for differentiating disordered respondents (those exceeding the cutoff point) from nondisordered respondents. In our nonclinical female sample of 232 respondents, 15.1% exceeded the EAT diagnostic cutoff point for disordered eating. The reliability of the EAT was assessed using Cronbach's alpha. For the 40-item scale, $\alpha = .91$.

The Eating Disorders Inventory (EDI; Garner et al., 1984) is based on eight subscales that yield separate scores for eight distinct dimensions. Only the subscales for body dissatisfaction, drive for thinness, perfectionism, ineffectiveness, and bulimia were needed for the purposes of this study. Therefore, data on the other three subscales (interoceptive awareness, maturity fears, and interpersonal distrust) were not collected. The structure of the EDI items is similar to that of the EAT items. Representative samples include: "I think my hips are too big" (body dissatisfaction), "I exaggerate or magnify the importance of weight" (drive for thinness), "I feel that I must do things perfectly or not do them at all" (perfectionism), "I feel generally in control of things in my life" (ineffectiveness), and "I have gone on eating binges where I felt that I could not stop" (bulimia; Garner et al., 1984). The reliability of each EDI subscale was assessed using Cronbach's alpha. For the nine-item body dissatisfaction subscale, $\alpha = .92$. For the seven-item drive for thinness subscale, $\alpha = .92$. For the six-item perfectionism subscale, $\alpha = .75$. For the 10-item ineffectiveness subscale, $\alpha = .90$. For the seven-item bulimia subscale, $\alpha = .89$.

The EDI has no anorexia subscale. Consequently, nine items were chosen from the EAT to construct a scale for measuring anorexia (restrained eating). Each of the nine chosen items had strong face validity with respect to restrained eating, and items that measured bulimic impulses and behaviors were deliberately omitted. Representative samples of items include "Avoid eating when I am hungry" and "Like my stomach to be empty" (Garner & Garfinkel, 1979). Tests of internal and external consistency confirmed that each item correlated positively with every other item within the scale, and each item within the scale correlated similarly with items outside the scale. For the nine-item anorexia scale, $\alpha = .78$.

Men's endorsement of thinness and dieting. The survey for men did not contain the full EAT and EDI. Both of these instruments contain items that have very little face validity for men, whose weight concerns are distinct from women's. For example, the body dissatisfaction subscale of the EDI measures contentment with one's hips and buttocks, areas of the body that are generally of greater concern regarding weight control for women than for men. The survey for men thus contained only those items in the EAT and EDI subscales that reflected overall (non-gender-specific) attitudes toward fitness and thinness. Thus, it should be noted that the men's version of the questionnaire was inadequate for measuring disordered eating; rather, it was used to indicate the extent to which male respondents held general attitudes in favor of personal dieting and thinness.

A 14-item scale was constructed to measure male respondents' endorsement of personal thinness and dieting. Items for this scale were collected from existing scales (such as the EAT) or generated by the authors.¹ Each of the 14 items had strong face validity. Representative sample items include "I am preoccupied with a desire to be thinner" and "I eat diet foods" (Garner & Garfinkel, 1979), as well as "How important is it to you that you be lean?" Tests of internal and external consistency confirmed that each item correlated positively with every other item within the scale, and each item within the scale correlated similarly with items outside the scale. For the 14-item endorsement of personal thinness and dieting scale, $\alpha = .84$.

Finally, we constructed a six-item scale to measure male respondents' endorsement of thinness for women. Items for this scale were generated by the authors.² Each of the six chosen items had strong face validity. Representative

¹ *The Men's Endorsement of Thinness and Dieting for Self Scale* included the following 14 items paired with six-point Likert-type scales measuring agreement, importance, or frequency of behavior: "I am aware of the calorie content of foods that I eat," "I am preoccupied with a desire to be thinner," "I exercise strenuously to burn off calories," "I think about burning up calories when I exercise," "I am preoccupied with the thought of having fat on my body," "I eat diet foods," "I display self-control around food," "I engage in dieting behavior," "I think that my stomach is too big," "I feel dissatisfied with the shape of my body," "I believe a guy must be lean (have little body fat) to be good-looking," "How important is it to you that you be lean?," "My friends believe a guy must be lean to be good-looking," and "How important is it to your friends that you be lean?"

² *The Men's Endorsement of Thinness and Dieting for Women Scale* included the following six items

Table 1. Response Options, Means, Standard Deviations, and Coding for Media Exposure Measures

Variable	Response Options (range)	M	SD	Coding Description
Television exposure per week (hours)	0 – 168	16.73 (f) 18.40 (m)	9.89 (f) 10.71 (m)	— —
Magazine titles read per month	0 – infinite	4.78 (f) 4.54 (m)	3.59 (f) 4.01 (m)	— —
Frequency of viewing				
Thin shows	0 – 4 (x 2 items)	5.43 (f) 2.62 (m)	2.68 (f) 2.63 (m)	0 = “never” 1 = “rarely”
Average shows	0 – 4 (x 2 items)	2.70 (f) 2.71 (m)	1.85 (f) 1.96 (m)	2 = “sometimes” 3 = “most of the time”
Heavy shows	0 – 4 (x 2 items)	2.77 (f) 1.57 (m)	1.61 (f) 1.52 (m)	4 = “regularly”
Frequency of reading				
News magazines	0 – 8	1.25 (f) 2.16 (m)	1.43 (f) 2.29 (m)	0 – 7 = “0 – 7” 8 = “8 or more”
Gossip magazines	0 – 8	0.98 (f) 0.78 (m)	1.41 (f) 1.32 (m)	
Fashion magazines	0 – 8	1.87 (f) 0.24 (m)	1.50 (f) 0.69 (m)	
Fitness magazines	0 – 8	0.68 (f) 0.83 (m)	1.03 (f) 1.41 (m)	
Men’s entertainment magazines	0 – 8	0.52 (m)	0.81 (m)	
Interest in television topics				
Dieting	0 – 4	2.20 (f) 0.86 (m)	1.27 (f) 0.99 (m)	0 = “much less interested” 1 = “somewhat less interested”
Fitness	0 – 4	2.84 (f) 2.06 (m)	1.12 (f) 1.19 (m)	2 = “no effect” 3 = “somewhat more interested”
Interest in magazine topics				
Dieting	0 – 4	2.43 (f) 1.09 (m)	1.25 (f) 1.06 (m)	4 = “much more interested”
Fitness	0 – 4	3.00 (f) 2.17 (m)	1.00 (f) 1.25 (m)	

Note. Means and standard deviations are reported for both females (f) and males (m).

sample items include “I believe a woman must be thin to be beautiful” and “How important is it to you that a woman you’re dating be thin?” Tests of inter-

paired with six-point Likert-type scales measuring agreement, importance, or frequency of behavior: “I believe a woman must be thin to be beautiful”; “How important is it to you that a woman you’re dating be thin?”; “My friends believe a woman must be thin to be beautiful”; “How important is it to your friends that a woman you’re dating be thin?”; “Please rate the following characteristics in terms of how important they are to you when you are choosing a woman to date or become involved with (slim figure)”; and “Imagine you have accepted a blind date with a woman, and you are just about to meet her. How disappointed would you be to discover the following characteristics in your date (overweight/fat)?”

Table 2. Response Options, Means, Standard Deviations, and Coding for Eating Disorder Measures (Female Respondents)

Variable	Response Options (range)	M	SD	Coding Description
Overall disordered eating (EAT score)	0 – 5 (x 40 items)	63.35	23.20	0 = "never" = 0
Anorexia	0 – 5 (x 9 items)	12.29	6.20	1 = "rarely" = 0
Bulimia	0 – 5 (x 7 items)	7.18	6.21	2 = "sometimes" = 0
Body dissatisfaction	0 – 5 (x 9 items)	26.54	11.19	3 = "often" = 1
Drive for thinness	0 – 5 (x 7 items)	14.85	9.02	4 = "usually" = 2
Ineffectiveness	0 – 5 (x 10 items)	12.93	8.12	5 = "always" = 3
Perfectionism	0 – 5 (x 6 items)	15.24	5.37	

Note. Codes were presented to respondents as six-point Likert-type scales with values ranging from 0 to 5. The first numerical value in the coding description denotes the value used in hypothesis testing. The second numerical value in the coding description represents how the first numerical value is systematically recoded by Garner and Garfinkel (1979) and Garner et al. (1984) to calculate a diagnostic score.

nal and external consistency confirmed that each item correlated positively with every other item within the scale, and each item within the scale correlated similarly with items outside the scale. The reliability of this scale, as assessed using Cronbach's alpha, was .81.

Results

Before proceeding with hypothesis testing, we calculated descriptive statistics for each variable. Means, standard deviations, and a list of response options and codes for all media exposure variables (for both women and men) appear in Table 1. In addition, Table 2 features means, standard deviations, response options, and codes for all eating disorder variables (women only).

Results for Female Respondents

Because the study involved multiple predictor and criterion variables, a multivariate multiple-regression analysis was first performed on all variables of interest using the Statistical Package for the Social Sciences (SPSS) MANOVA program. This analysis was deemed appropriate given that the set of criterion variables was composed entirely of eating disorder variables, which were expected to be interrelated. Disordered eating, body dissatisfaction, drive for thinness, perfectionism, ineffectiveness, anorexia, and bulimia were entered as criterion variables. Overall television viewing; overall magazine reading; viewing thin shows, average shows, and heavy shows; and reading news,

gossip, fashion, and fitness magazines were entered as predictor variables. A Wilk's lambda of .61 was significant, $F(9, 217) = 1.98, p < .001$. R^2 values based on univariate F tests ($df = 9, 217$) for each of the criterion variables showed that the set of media consumption variables significantly predicted the following criterion variables: overall disordered eating ($R^2 = .12, F = 3.79, p < .001$); anorexia ($R^2 = .13, F = 4.18, p < .001$); bulimia ($R^2 = .07, F = 2.07, p < .05$); body dissatisfaction ($R^2 = .07, F = 1.92, p < .05$); and drive for thinness ($R^2 = .07, F = 1.92, p < .05$). Perfectionism ($R^2 = .03, F = 0.71, p > .10$) and ineffectiveness ($R^2 = .04, F = 1.05, p > .10$) were not significantly predicted by the media consumption variables.

To address the individual hypotheses, separate multiple regression analyses were performed for each criterion variable to examine its relationship to specific predictor variables. The first hypothesis, that media consumption would be positively related to eating disorder symptomatology in women, was supported for magazines but not for television. The simultaneous multiple regression of EAT scores predicted by overall magazine reading and overall television viewing, $R^2 = .06, F(2, 226) = 7.41, p < .001$, revealed that only overall magazine reading was a significant unique predictor of EAT scores ($\beta = .25, p < .001$).

The expectation that exposure to television shows with primarily thin main characters (*Beverly Hills 90210* and *Melrose Place*) would be related to greater eating disorder symptomatology was unsupported. A multiple regression analysis of EAT scores predicted by viewing thin shows, average shows, and heavy shows yielded nonsignificant results for all three predictor variables, $R^2 = .02, F(3, 225) = 1.60, p > .10$.

Fitness magazines were expected to be the most thinness depicting and thinness promoting of the specified magazine genres, as their primary purpose is to provide information about the attainment of a lean, fit body. Although fashion magazines may be defined as thinness depicting due to their portrayal of thin fashion models, they are not necessarily thinness promoting, as their primary purpose is to provide information about the fashion world, not dieting. Gossip and news magazines were not expected to relate significantly to disordered eating. The one-tailed correlations between each magazine genre and EAT scores fell into the expected pattern: EAT scores were most highly correlated with reading fitness magazines ($r = .30, p < .001$), followed by fashion magazines ($r = .17, p < .01$), news magazines ($r = .12, p < .05$), and gossip magazines ($r = .11, p < .05$).

A multiple regression analysis of EAT scores predicted by reading of fitness, fashion, gossip, and news magazines, $R^2 = .10, F(4, 224) = 6.27, p < .001$, revealed that only fitness magazine reading was a unique predictor of EAT scores ($\beta = .26, p < .001$). When interest in fitness and dieting as magazine topics were entered on the first step of a hierarchical multiple regression analysis with fitness magazine reading entered on the second step, both interest variables significantly predicted EAT scores ($\beta = .15, p < .05$ for interest in fitness topics; $\beta = .41, p < .001$ for interest in dieting topics). With

the interest variables partialled out, the relationship between fitness magazine reading and EAT scores remained significant ($\beta = .15$, R^2 change = $.02$, $p < .05$). All three predictor variables accounted for a significant portion of the variance in EAT scores, $R^2 = .31$, $F(3, 225) = 34.12$, $p < .001$. Fitness magazine reading thus appears to be related to eating disorder symptomatology above and beyond the contribution of selective exposure based on interest in fitness and dieting as magazine topics.

The second hypothesis posited that media consumption would predict body dissatisfaction. This hypothesis was supported primarily for television. A multiple regression analysis of body dissatisfaction predicted by overall television viewing and magazine reading, $R^2 = .04$, $F(2, 227) = 4.32$, $p < .01$, revealed that only overall television viewing was a significant unique predictor of body dissatisfaction ($\beta = .17$, $p < .05$).

Further regression analyses were conducted to examine the role of TDP media in predicting body dissatisfaction. A multiple regression analysis of body dissatisfaction predicted by viewing thin shows, average shows, and heavy shows yielded unexpected results. Only viewing shows with heavy main characters was significantly related to body dissatisfaction ($\beta = .16$, $p < .05$). Together, the predictor variables did not account for a significant portion of the variance in body dissatisfaction, $R^2 = .03$, $F(3, 226) = 2.30$, $p < .08$. The corresponding multiple regression of body dissatisfaction predicted by reading of fitness, fashion, gossip, and news magazines, $R^2 = .03$, $F(4, 225) = 1.69$, $p > .10$, revealed a significant positive relationship between body dissatisfaction and fashion magazines only ($\beta = .16$, $p < .05$); reading fitness, gossip, and news magazines was not significantly related to body dissatisfaction.

The analogous hypothesis that media consumption would predict drive for thinness was supported primarily for magazines. A multiple regression analysis of drive for thinness predicted by overall television viewing and magazine reading, $R^2 = .03$, $F(2, 229) = 3.39$, $p < .05$, revealed that overall magazine reading was a significant unique predictor of drive for thinness ($\beta = .14$, $p < .05$).

As with body dissatisfaction, further regression analyses were conducted to examine the role of TDP media in predicting drive for thinness. The simultaneous multiple regression analysis of drive for thinness predicted by viewing thin shows, average shows, and heavy shows, $R^2 = .04$, $F(3, 228) = 2.74$, $p < .05$, yielded a significant positive regression coefficient for viewing thin shows only ($\beta = .15$, $p < .05$). The corresponding simultaneous multiple regression of drive for thinness predicted by reading fitness, fashion, gossip, and news magazines, $R^2 = .04$, $F(4, 227) = 2.63$, $p < .05$, yielded a significant positive regression coefficient for fashion magazines only ($\beta = .16$, $p < .05$); reading fitness, gossip, and news magazines was not significantly related to drive for thinness.

The fourth hypothesis posited that media consumption would be more highly related to anorexic (restrained eating) behavior than to bulimic (bingeing and purging) behavior. Anorexia nervosa and bulimia nervosa are

not independent. The American Psychiatric Association (1994) distinguishes these disorders conceptually by the behaviors from which they derive their Latin names: restrained eating in anorexia (“lack of appetite”) and bingeing and purging in bulimia (“ox-like appetite”).

To examine the relationship between media consumption and anorexic and bulimic behavior, two simultaneous multiple regression analyses were performed: anorexic behavior predicted by overall television viewing and overall magazine reading, and bulimic behavior predicted by the same two variables. Both anorexic and bulimic behavior were significantly predicted by overall magazine reading (beta = .28, $p < .001$ for anorexia; beta = .19, $p < .01$ for bulimia), but not by overall television viewing. Overall magazine reading and overall television viewing together accounted for a significant portion of the variance in both anorexia, $R^2 = .08$, $F(2, 228) = 9.51$, $p < .001$, and bulimia, $R^2 = .04$, $F(2, 229) = 4.17$, $p < .01$.

The difference between the anorexia and bulimia slope coefficients was tested using Cohen and Cohen’s (1983) formula for testing the difference between dependent slopes (p. 57). The anorexia slope exceeded that of the bulimia slope, but this difference was not significant ($t = 1.60$, $df = 229$, $p < .10$). Thus, it may be premature to conclude that anorexic behavior is more highly related to overall magazine consumption than bulimic behavior. However, the following analyses suggest that anorexic behavior may be more highly related to the reading of specific magazine genres and the viewing of specific shows than bulimic behavior.

Multiple regression analyses of both anorexia and bulimia were run with viewing of thin shows, average shows, and heavy shows as predictor variables. Together the predictor variables did not account for a significant portion of the variance in anorexia, $R^2 = .03$, $F(3, 227) = 2.42$, $p < .07$, but viewing of thin shows was a significant unique predictor (beta = .14, $p < .05$). None of the predictor variables were significant predictors of bulimic behaviors, $R^2 = .02$, $F(3, 228) = 1.81$, $p > .10$, although viewing of heavy shows approached significance (beta = .13, $p < .06$) as a unique predictor. Two additional multiple regression analyses were run with the same criterion variables but with fitness, fashion, gossip, and news magazine reading as predictor variables. The four magazine genre variables together accounted for a significant portion of variance in anorexia, $R^2 = .11$, $F(4, 226) = 7.03$, $p < .001$; as expected, fitness magazine reading was a significant unique predictor (beta = .25, $p < .001$), but the other magazine variables were not. When a hierarchical multiple regression analysis was run with interest in fitness and dieting as magazine topics on the first step and fitness magazine reading on the second step, fitness magazine reading remained a significant predictor of anorexia (beta = .16, R^2 change = .03, $p < .01$). The corresponding analysis of bulimia predicted by the four magazine genres revealed that none of the predictor variables were significant predictors of bulimia, $R^2 = .04$, $F(4, 227) = 2.05$, $p < .09$.

The relationships between media consumption and perfectionism and media consumption and ineffectiveness were also examined with multiple regression

Table 3. Response Options, Means, Standard Deviations, and Coding for Measures of Male Respondents' Endorsement of Thinness and Dieting

Variable	Response Options (range)	M	SD	Coding Description
Importance of thinness for women	0 – 5 (x 6 items)	19.35	5.53	0 = "not at all important" 5 = "extremely important"
Importance of thinness in self	0 – 5 (x 14 items)	25.23	10.84	
Importance of qualities in hypothetical dating partner				
Pretty face	0 – 6	4.52	1.01	0 = "not at all important"
Sense of humor	0 – 6	4.88	1.11	3 = "moderately important"
Slim figure	0 – 6	3.98	1.17	6 = "extremely important"
Intelligence	0 – 6	4.88	0.98	
Disappointment in qualities in hypothetical blind date				
Unattractive face	0 – 6	3.70	1.15	0 = "not at all disappointed"
Poor sense of humor	0 – 6	4.34	1.40	3 = "moderately disappointed"
Overweight/fat	0 – 6	4.15	1.42	6 = "extremely disappointed"
Not very intelligent	0 – 6	4.16	1.46	

Note. Codes correspond to semantic differential scales in which only the extreme values, and in some cases the central value, were labeled in the questionnaires.

analyses. No significant effects were found for perfectionism, $R^2 = .00$, $F(2, 227) = .04$, $p > .10$. Together, overall television viewing and magazine reading failed to predict ineffectiveness, $R^2 = .02$, $F(2, 229) = 2.38$, $p < .10$, but overall television viewing was a significant unique predictor (beta = .14, $p < .05$). In addition, the relationships between TDP media consumption and perfectionism and TDP media consumption and ineffectiveness were explored. Viewing thin shows, average shows, and heavy shows failed to predict both perfectionism, $R^2 = .01$, $F(3, 226) = .61$, $p > .10$, and ineffectiveness, $R^2 = .02$, $F(3, 228) = 1.77$, $p > .10$, but viewing heavy shows was a significant unique predictor of ineffectiveness (beta = .16, $p < .05$). Similarly, reading fitness, fashion, gossip, and news magazines failed to predict both perfectionism, $R^2 = .02$, $F(4, 225) = 1.13$, $p > .10$, and ineffectiveness, $R^2 = .01$, $F(4, 227) = .39$, $p > .10$. Tests of the interactions between each of these variables and media use in predicting disordered eating are reported elsewhere (Harrison, 1994).

Results for Male Respondents

Before proceeding with hypothesis testing for male respondents, we calculated descriptive statistics for all relevant variables. Table 3 features means, standard

deviations, response options, and codes for variables measuring male respondents' endorsement of thinness and dieting for themselves and for women. (Refer to Table 1 for men's media consumption variables.)

The fifth hypothesis posited that media consumption would be positively related to men's endorsement of thinness and dieting for themselves. A simultaneous multiple regression of men's endorsement of personal thinness and dieting predicted by overall television viewing and overall magazine reading revealed that, taken together, the predictor variables accounted for a significant portion of the variance in the criterion variable, $R^2 = .05$, $F(2, 185) = 4.52$, $p < .01$, but only overall magazine reading was a significant unique predictor (beta = .21, $p < .01$).

Further regression analyses were conducted to examine the role of TDP media in predicting men's endorsement of personal thinness and dieting. A multiple regression analysis of men's endorsement of personal thinness and dieting predicted by viewing thin shows, average shows, and heavy shows, $R^2 = .07$, $F(3, 184) = 4.88$, $p < .01$, yielded a significant positive regression coefficient for viewing thin shows only (beta = .23, $p < .01$). When interest in fitness and dieting as television program topics were entered in the first step of a hierarchical multiple regression analysis with viewing of thin shows entered on the second step, both interest variables significantly predicted men's endorsement of personal thinness and dieting (beta = .15, $p < .05$ for interest in fitness topics; beta = .41, $p < .001$ for interest in dieting topics). When the interest variables were partialled out, the relationship between viewing thin shows and the criterion variable remained significant (beta = .17, R^2 change = .03, $p < .01$). For men, viewing thin shows thus appears to be related to endorsement of personal thinness and dieting above and beyond the contribution of selective exposure based on interest in fitness and dieting as television topics. The corresponding multiple regression of men's endorsement of personal thinness and dieting predicted by reading fitness, fashion, gossip, news, and men's entertainment magazines yielded no significant positive regression coefficients, $R^2 = .04$, $F(5, 182) = 1.73$, $p < .08$.

The last hypothesis posited that for male respondents, media consumption would increase endorsement of thinness for women. Multiple regression analyses of men's endorsement of thinness for women were conducted with three different sets of predictor variables: overall television viewing and overall magazine reading, $R^2 = .02$, $F(2, 182) = 2.07$, $p > .10$; viewing thin shows, average shows, and heavy shows, $R^2 = .01$, $F(3, 181) = .50$, $p > .10$; and reading fitness, fashion, gossip, news, and men's entertainment magazines, $R^2 = .03$, $F(5, 179) = .92$, $p > .10$. Contrary to expectations, none of the above predictor variables was a significant positive predictor of men's overall estimations of the importance of thinness in women. However, significant zero-order correlations emerged when men's media consumption and endorsement of thinness for women were broken down into their requisite components and intercorrelated. Reading fitness magazines was significantly correlated with the belief that a slim figure is an important characteristic in a woman ($r = .16$, $p <$

.01). Overall magazine reading and reading of men's entertainment magazines such as *Playboy* were both correlated with men's anticipated level of disappointment in meeting an overweight blind date ($r = .17, p < .01$ and $r = .16, p < .01$, respectively). Interestingly, viewing *Designing Women*, a heavy show, was significantly correlated with men's estimations of how important it is to their friends that a woman they (the respondents themselves) date be thin ($r = .19, p < .001$).

Discussion

Summary and Interpretation of Results

In general, media consumption, especially TDP media, significantly predicted women's eating disorder symptomatology and men's attitudes in favor of personal thinness and dieting. These findings were more consistent for overall magazine reading than for overall television viewing. However, both types of TDP media—fitness and fashion magazines and thin shows—were generally consistent predictors of the criterion variables for women and men.

Summary and implications for women. As expected, the relationship between mass media consumption and women's eating disorder symptomatology seems to be stronger for magazine reading than for television viewing. Overall magazine reading was significantly and positively related to EAT scores; overall television viewing was not. When consumption of TDP media was examined, the same pattern emerged. A multiple regression analysis showed that fitness magazine reading was a significant positive predictor of EAT scores, even when interest in fitness and dieting as magazine topics was partialled out. In other words, women who frequently read fitness magazines for reasons other than interest in fitness and dieting still scored higher on the disordered-eating inventory than women who rarely read fitness magazines. Selective exposure based on interest, then, cannot fully account for the demonstrated relationship between consumption of fitness magazines and eating disorder symptomatology.

In contrast, the viewing of TDP television shows (*Beverly Hills 90210* and *Melrose Place*) was not significantly related to EAT scores. One reason for the lack of significant findings for thin shows might have been their popularity among the female sample; 62% of the female respondents reported watching *Beverly Hills 90210* "most of the time" or "regularly," and 61% reported watching *Melrose Place* "most of the time" or "regularly." A ceiling effect may have restricted the variance necessary to draw reliable conclusions from these data.

In addition to EAT scores, two of the other variables tested to determine their connection to women's media consumption were body dissatisfaction and drive for thinness. A multiple regression of body dissatisfaction predicted by overall television viewing and overall magazine reading revealed that television viewing was a significant predictor of body dissatisfaction, but magazine reading was not. When TDP media were examined, an unexpected finding

surfaced: Only the viewing of heavy shows and the reading of fashion magazines were significantly related to body dissatisfaction. In contrast, a multiple regression of drive for thinness predicted by overall television viewing and overall magazine reading revealed that magazine reading was a significant predictor of drive for thinness, but television viewing was not. When TDP media were examined, only viewing of thin shows and reading of fashion magazines were significantly related to drive for thinness.

Why does body dissatisfaction appear to be more strongly related to television viewing than magazine reading, whereas drive for thinness is more strongly related to magazine reading than television viewing? Similarly, why is body dissatisfaction related to viewing heavy shows and not thin shows? Unexpected findings like this prompt a second look at the criterion variables in question. Body dissatisfaction and drive for thinness have both been closely tied to eating disorders, yet they are distinct psychological vulnerabilities. Of the two constructs, drive for thinness is more compatible with social learning theory. Conceptually, it fits in with external and vicarious incentives as behavioral motivators. According to the social learning paradigm, once incentives (i.e., rewards associated with thinness) are recognized and assigned positive value, the drive to achieve these incentives engages and the behaviors necessary to achieve them (i.e., dieting or exercise or both) will be performed. Body dissatisfaction, in contrast, is associated with no particular action or behavior; it is a set of attitudes, not intentions. Thus, it may not be as affected as drive for thinness by information sources, such as magazines, that explain how to achieve thinness behaviorally. Whatever the case, further investigation into the differences between these two constructs seems appropriate.

Just as body dissatisfaction and drive for thinness are two distinct but highly related vulnerabilities, anorexia and bulimia are two distinct but highly related manifestations of disordered-eating behavior. Following social learning theory, anorexic, or restrained eating, behavior was expected to be more related to media consumption than bulimic, or bingeing and purging, behavior due to the prevalence of modelable dieting and exercise behaviors, coupled with a lack of modelable bingeing and purging behaviors, depicted in the mass media. Multiple regression analyses revealed that both anorexic and bulimic behaviors were significantly predicted by overall magazine reading, even after interest in dieting and fitness as magazine topics had been partialled out of the regression equations. A test of the difference between the anorexia slope and the bulimia slope, however, revealed that they were not significantly different. Given the high correlation between anorexia and bulimia in this study ($r = .53$, $p < .001$), it may have been statistically unreasonable to expect to find one set of behaviors significantly more related to media consumption than the other.

This expectation is still somewhat justified, however, by the findings of the analyses examining TDP media in conjunction with anorexic and bulimic behaviors. As expected, reading fitness magazines and viewing thin shows were significant positive predictors of anorexic behavior. The relationship between fitness magazines and anorexic behavior remained significant even

when interest in fitness and dieting as magazine topics was partialled out of the regression equation. In contrast, no TDP media variables significantly predicted bulimic behavior. These differential results suggest that empirically describing the distinct relationships between anorexia and media consumption, and bulimia and media consumption, may be a worthwhile pursuit for future research.

Summary and implications for men. In an effort to begin exploring the relationship between men's media consumption and their diet-related attitudes and behaviors, two hypotheses were formed. It was predicted that media consumption, especially TDP media, would increase men's endorsement of thinness and dieting both for themselves and for women. Overall magazine reading was a significant positive predictor of men's endorsement of thinness and dieting for themselves, but overall television viewing was not.

When TDP media were examined, however, only viewing thin shows was a significant predictor of men's endorsement of personal thinness and dieting. This relationship remained when interest in dieting and fitness as television program topics was partialled out. It is difficult to say which type of medium—television or magazines—is more related to men's endorsement of thinness and dieting for themselves. Only five magazine genres were investigated in this study. It is still quite possible that untested magazine genres are significantly related to men's endorsement of personal thinness and dieting.

When men's overall endorsement of thinness for women was tested as a criterion variable, regression analyses yielded no significant effects for the media use variables. When the scale used to measure men's endorsement of thinness in women was broken down into its requisite items, however, significant correlations emerged between these single items and specific media use variables, such that overall magazine reading and the reading of men's entertainment magazines were significantly and positively correlated with attitudes stressing the importance of a woman's thinness. Compelling as they may be, some skepticism is warranted in the interpretation of these few correlations, given the nonsignificance of the relationship between media consumption and the reliable endorsement-of-thinness-in-women scale. In summary, it appears that media exposure, and especially exposure to TDP media, has a significant impact on men's endorsement of thinness and dieting for themselves, and a possible but still undemonstrated impact on men's endorsement of thinness and dieting for women.

Social Implications

Whether media exposure is related to disordered eating because exposure to TDP media fuels eating disorder symptomatology, or people high in eating disorder symptomatology selectively expose themselves to such media, is unclear. The results of the present study suggest that both processes occur. Consumption of TDP media may indeed fuel disordered eating, leading to increased interest in thinness-depicting and thinness-promoting media topics, which leads back to increased consumption of TDP media, and so on. Com-

parisons of the disordered respondents (the 15.1% who scored over the diagnostic cutoff point on the EAT) and the most highly nondisordered respondents (lowest 15.1% EAT scorers) showed that the disordered individuals were significantly more interested in fitness and dieting as media topics than the nondisordered individuals ($t[30] = 5.80, p < .001$). At the same time, when respondents' interest in dieting and fitness as media topics was partialled out, the effects of most of the TDP media on eating disorder symptomatology remained. Thus, while interest in TDP media seems to be a required component of the mass media/eating disorder relationship, TDP media consumption also seems to have an effect on eating disorder symptomatology regardless of the level of initial interest in fitness and dieting as media topics.

The broader social implications of this research become apparent when one considers the current debate over the appropriateness of ultrathin fashion models and celebrities as role models for girls. Articles in magazines, including *People Weekly* (Lague, 1993), have suggested that the appearance of certain waiflike models in the media sends a dangerous message about disordered eating to teenagers. In this study, however, we found that reading whole fitness and fashion magazine genres and viewing thin shows were related to disordered eating. Thus, British model Kate Moss and other ultrathin cultural icons of feminine beauty who have sparked much of this controversy may not be uniquely dangerous. Instead, the possibility should be considered that the overall emphasis on feminine thinness exemplified by multiple media depictions of slender models and actresses should be considered for its possible influence on disordered eating.

Limitations and Further Research

An eating disorder may be thought of as a pattern of behaviors following a temporal course of development (Garner & Garfinkel, 1985). This study, in contrast, was cross-sectional. We relied on respondents' self-reports of current eating behaviors and current media use habits to learn about their relationship without examining how these two types of behavior changed in each respondent over time. Thus, causal inferences cannot be drawn with confidence from this study. The ideal design for examining the relationship between media use and the development of eating disorders would be longitudinal, beginning with younger participants before they develop eating disorders and tracking their attitudinal and behavioral development and media use habits over several years.

A second limitation of this study is the inadequacy of the instruments available (such as the EAT and EDI) for measuring disordered eating in males with the same validity as females. Given that males' dieting attitudes and behaviors appear to be influenced by exposure to TDP media in the same direction as females' dieting attitudes and behaviors, the construction of a more valid instrument for measuring disordered eating in men seems called for.

Finally, the effect sizes found in this study were relatively small; the proportion of variance accounted for by the various media consumption variables rarely exceeded .05. This is to be expected, given that eating disorders are

believed to result from multiple sources including familial, psychological, biological, and sociocultural factors, only one of which was examined in this study. Indeed, effect sizes of the magnitude found in this study are actually impressive in light of the fact that they represent the sole impact of television and magazines, which comprise a relatively minute segment of the body of sociocultural factors that may contribute to disordered eating. In any case, where health issues are concerned, dismissing study findings because of small effect sizes may be an unwise and potentially dangerous affair.

Overall, this study yielded a pattern of findings consistent with social learning theory. Respondents' eating disorder symptomatology was significantly related to media consumption, especially TDP media. This relationship was most consistent for magazines, which offer more behavioral direction about dieting than does television entertainment. In addition, the proposed dampening effect of television advertisements for fattening foods on the modeling of restrained eating from television drama may have been an important factor in minimizing the observable relationship between overall television viewing and disordered-eating symptomatology. It is impossible to determine from this study alone whether overall television exposure has little effect, or whether the significant effect of television drama appears insignificant because it is, in effect, canceled out by the potentially opposite effect of television advertisements. Further research, in which the possible differential effects of television drama and advertising are identified and controlled, seems to be called for.

This study is the first to detail the relationship between media use and eating disorder symptomatology from the theoretical standpoint of social learning. It also represents one of the first efforts to undertake a detailed exploration of the effects that different types of media content may exert on disordered eating. As such, it raises at least as many questions as it answers. Future research in this area may prove fruitful by combining the social learning paradigm with a longitudinal study design, or by examining the relationship between media consumption and disordered-eating symptomatology from a cognitive or self-schematic theoretical viewpoint.

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