Influence of Mass Media on Body Image and Eating Disordered Attitudes and Behaviors in Females: A Review of Effects and Processes

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This article reviews research on the effects of television and magazines on body image and on disordered eating attitudes and behaviors in females. Evidence from different types of studies in the fields of eating disorders, media psychology, health psychology, and mass communication indicates that mass media are an extremely important source of information and reinforcement in relation to the nature of the thin beauty ideal, its importance, and how to attain it. Although considerable research remains to be done, evidence is accumulating that repeated exposure to media and to both direct and indirect (via media’s effects on peers, parents, coaches, physicians, etc.) pressures from media to be thin constitute risk factors for body dissatisfaction, concerns over weight and disordered eating behaviors in adolescent girls and young women. To guide further research, as well as the prevention and treatment of disordered eating, we present a figural summary of media effects that integrates moderating and mediating factors such as internalization of the thin beauty ideal.
ideal, social comparison, and activation of the thinness schema. We argue that risk factor research, prevention, and treatment will benefit from systematic research designed to clarify how the impact of various mass media is shaped by source and receiver/perceiver factors.

Media are among the principal social agents in many societies around the world. Television, magazines, newspapers, radio, cinema, advertising, the Internet, and other so-called “new media” or “new technologies” occupy—if not invade—much of our leisure time, and indeed our working time. Mass media transmit the ideas, values, norms, attitudes, and behaviors that socialize and construct the social reality of those who use them for a wide variety of reasons (Bryant & Oliver, 2009). The processes of media selection, media use, and media effects are particularly important for children and adolescents because the powerful, insistent, market-driven media have become serious rivals to the family and school with regard to education and socialization (Bercedo Sanz et al., 2005). In developed countries, television has become (after sleep) children’s primary activity (American Academy of Pediatrics, 2001). A recent study in Spain found that adolescents consume an average of 3 hours to 3.2 hours a day of television on weekdays and weekends, respectively (Bercedo Sanz et al., 2005). These figures approach those currently available for the Spanish adult population, who, according to an official survey, spend on average 3.8 hours a day watching television (Estudio General de Medios, 2009). A recent report of the Kaiser Family Foundation, in United States, shows that the average amount of time spent watching television content among all 8–18 year olds is 4.29 hours in a typical day (Rideout, Foehr, & Roberts, 2010). Magazines aimed at females, and especially adolescents, have increased in number and availability in recent years. An estimated 33 million 12–19 year olds spend upward of $175 billion annually on these magazines (Kaiser Family Foundation, 2004).

Television, magazines, films, billboards, and the like frequently offer a distorted vision of the world (Bercedo Sanz et al., 2005; Shrum, 2009), and it may be difficult for children and adolescents to distinguish whether what they see is real or not, so that they are more vulnerable to the messages transmitted (American Academy of Pediatrics, 2001). In a classic content analysis of prime-time television, Kaufman (1980) concluded that television was obsessed with thinness, and the most prevalent and salient content of magazines aimed at adolescent females was focused on appearance (Kaiser Family Foundation, 2004). Undeniably, a substantial portion of media content consumed by children and adolescents is replete with unhealthy messages about the beauty ideal, body size, food, weight control, and the gender roles of women and girls, as well as use of alcohol, tobacco, and other substances for managing one’s emotions and self-presentation (see, e.g., Greenberg,
Rosaen, Worrell, Salmon, & Volkman, 2009; see also reviews by Levine & Harrison, 2004, 2009). People are often unaware—and mass media work hard to keep it that way—of the extent to which, and just exactly how mass media play an important role in promoting consumerism, body objectification, and internalization of the current beauty ideal. Similarly, various components of the media, including critics and other commentators, tend to avoid discussion of how often the fashion industries use digital technology to manipulate images (Engeln-Maddox, 2006). These are the images that set the current standards of beauty and sexuality that are seen (experienced) as “real” and “normative” but are actually impossible to attain (Levine & Harrison, 2004, 2009; Levine & Murken, 2009; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Thompson & Stice, 2001; Toro, 2004; Utter, Neumark-Sztainer, Wall, & Story, 2003).

For these and other reasons, many researchers argue that mass media are one of the principal factors behind body dissatisfaction, concerns about weight, and disordered eating behavior (see, e.g., Levine & Murken, 2009). The purpose of this article is to review, in a critical but necessarily selective fashion, current research on the effects of the media on body image and on disordered eating attitudes and behaviors. This analysis helps to clarify the empirical status of media effects, to identify the most vulnerable types of individuals, and to raise specific questions and suggestions about the implications of this work for causal models, for treatment, and for prevention. Although there is a growing literature examining the Internet (see, e.g., Bardone-Cone & Kass, 2007) and the impact of media on adolescent boys and young adult men (see, e.g., Bartlett, Vowels, & Saucier, 2008), the main focus of studies to date has been centered on adolescent girls and female undergraduates and how they are influenced by television and magazines, which are in fact the media most widely consumed by adolescents (Estudio General de Medios, 2006; Roberts, Foehr, & Rideout, 2005).

There are many ways to segment and organize the data on media effects (see, e.g., Levine & Harrison, 2009; Levine & Murken, 2009). We have chosen to group the studies according to methodology because different designs have been employed for analyzing how exposure to media images and other messages influence females’ perceptions, attitudes, and behaviors. Furthermore, we review those moderators and mediators of media effects that to date have the strongest empirical support. Several recent reviews have addressed either the effects of media exposure on body image and disordered eating (see, e.g., Grabe, Ward, & Hyde, 2008) or processes such as internalization of the slender beauty ideal that moderate and/or mediate those effects (see, e.g., Cafri, Yamamiya, Branick, & Thompson, 2005). However, to the best of our knowledge, this is the first critical review to consider the nature and implications of media effects as a function of both research design and the psychological processes involved. Additionally, we present a figural summary that synthesizes the
relationships among constructs as discussed in our review and in recent meta-analyses.

CROSS-SECTIONAL STUDIES

Cross-sectional studies explore the concurrent association between exposure to television (certain programs in particular) or fashion magazines and variables such as concerns about weight, body dissatisfaction, and disordered eating behaviors. Magazines often show underweight models juxtaposed with articles about how to lose weight and how to change body shape (Dohnt & Tiggeman, 2006a; Harrison, 2000). Field, Cheung, et al.’s (1999) survey of 548 preadolescent and adolescent girls found that 69% acknowledged that images in magazines had influenced their conception of the ideal body, while 47% reported that they wanted to lose weight after seeing such images. Interestingly, for regular readers of fashion magazines, the probability of going on a diet or doing physical exercise to lose weight in accordance with the recommendations of a magazine article was two to three times greater than the probability of similar weight management behaviors in non-regular readers.

The tendency of magazine articles and advertisements to activate weight concerns and weight management behavior was also demonstrated in a survey study of 4,746 adolescent boys and girls conducted by Utter et al. (2003). Compared to girls who did not usually read fashion and glamour magazines, girls who frequently read articles about diets and issues related to weight loss were seven times more likely to practice a range of unhealthy weight control behaviors and six times more likely to engage in the most extreme unhealthy weight control behaviors (e.g., taking diet pills, vomiting, using laxatives, and using diuretics). The data suggested that these articles had a direct effect on unhealthy weight management behavior. Although girls who read “diet articles” were indeed more likely to have low self-esteem, greater body dissatisfaction, and more depressive mood than the girls who did not read them, none of these variables mediated the relationship between reading diet-related material in magazines and unhealthy weight-control behaviors. It is important to stress, however, that the magazines in question also appear to have a positive influence in promoting physical activity (Field, Cheung, et al., 1999) and a balanced diet (Utter et al., 2003).

In general, cross-sectional studies show that the average amount of time adolescent girls spend viewing appearance-focused media such as fashion and glamour magazines, soap operas, and music videos is positively and modestly correlated with body dissatisfaction, drive for thinness, internalization of the thin ideal, endorsement of surgery to attain a bust size that is neither small nor too large, and bulimic symptomatology (Levine & Murnen, 2009). Yet, there is substantial variability in the survey-based empirical findings, and there is conflicting evidence as to whether these relationships
apply to non-White as well as White girls. The issue is difficult to resolve because most studies are conducted with samples in which the vast majority of participants are White women and girls (DeBraganza & Hausenblas, 2010; Levine & Harrison, 2009; Levine & Murnen, 2009; Murnen, Levine, Smith, & Groesz, 2007).

Thus, it is important to acknowledge, for example, that some studies of adolescent samples have found no relationship between weight and appearance concerns and the variables of exposure to television, in general, as well as to other electronic media. However, these same studies have found effects of exposure to certain genres of television programming. Borzekowski, Robinson, and Killen’s (2000) study of 837 adolescent girls explored the relationship between use of electronic media (watching television, watching videos, playing on the computer and watching music videos) and both perceived importance of one’s appearance and preoccupation with one’s weight. The only statistically significant relationship was a weak association, mediated by level of body fat and ethnicity, between hours spent watching music videos and concerns about appearance and weight; this association was strongest among the Black girls. In a study of nearly 100 Australian adolescents ages 15 and 16, Tiggemann and Pickering (1996) failed to find a significant association between amount of television watched and either body dissatisfaction or drive for thinness. But amount of time spent watching soap operas and movies was correlated significantly with body dissatisfaction, while time spent watching music videos was associated with drive for thinness. These results are not surprising because music videos promote high levels of sex-role stereotyping and feature attractive women while focusing on physical appearances characterized by thin ideal and provocative clothing.

In contrast to studies with adolescents, studies with children more consistently find a relationship between exposure to television and both disordered eating and preoccupation with physical appearance. For example, in a study of 303 boys and girls with an average age of 7.45 years, Harrison (2000) found that extent of television exposure was positively correlated with disordered eating in both sexes. In addition, the greater the exposure to television, the more likely that boys would negatively stereotype fat girls, but not fat boys. Harrison (2000) concluded that both girls and boys, but especially boys, can learn to denigrate fatness before learning to idealize thinness.

It appears that television and magazines have different effects, perhaps as a function of age and outcome variable (Grabe et al., 2008; Levine & Harrison, 2009; Levine & Murnen, 2009). Tiggemann (2003) analyzed the correlates of television and magazine exposure separately in a sample of 104 female Australian university students. As Tiggemann expected, extent of reading fashion and beauty magazines was related to internalization of the thin beauty ideal, which mediates the relationship between reading
magazines and body dissatisfaction; both Stice’s (1994) Dual Pathway model and Thompson, van den Berg, Roehrig, Guarda, and Heinberg’s (2004) Tri-partite model of sociocultural influences also predicted such findings. In contrast, the amount of television watched was directly related to body dissatisfaction, with no evident relationship to internalization of the thin beauty ideal; these results are consistent with those obtained in Harrison’s (2000) study of children.

It seems that the underlying processes linking magazine reading to body image are different from those linking television watching to body image (Harrison 2000; Tiggemann, 2003). The complexity of this matter is illustrated in a recent study by Dohnt and Tiggemann (2006a) that explored peer and media influences on body image concerns and dieting awareness in 128 girls ages 5 to 8 years old. Awareness of the thin ideal and the ways of achieving this thin ideal occurs at early ages; 6 years of age was identified as the likely age of onset for the desire for thinness. Those young girls who spent more time looking at magazines aimed at adult women reported greater dissatisfaction with their appearance. As important, the greater the level of engagement with music television shows and appearance-focused magazines, the stronger the level of dieting awareness.

More research is needed to verify and clarify the potentially important distinction between television and magazine effects. Grabe et al.’s (2008) meta-analysis did not find a difference in effect size for the relationship between internalization of the thin ideal and magazine exposure ($d = 0.37$, $k = 14$; see the note for Table 1 to interpret the effect size) versus television exposure ($d = 0.39$, $k = 7$) or composite measures of media exposure ($d = 0.33$, $k = 2$), but this heterogeneity analysis did not distinguish between survey-based (correlational) and experimental studies. Tiggemann’s (2003) data are, however, consistent with Murnen et al.’s (2007) meta-analytic finding that the strongest relationship across media and criterion variables was that between exposure to fashion magazines and internalization of the thin beauty ideal, with moderate effect sizes ($d = 0.42$). Murnen et al. found smaller but still statistically significant correlations ($d’s = 0.04$ to 0.18) for the relationship between television exposure in general and criterion variables categorized as thin-ideal internalization, body dissatisfaction, weight and shape control, and disordered eating.

In summary, the weight of evidence from individual cross-sectional studies and from meta-analyses (see Table 1) indicates that greater use of the mass media—specifically fashion magazines and television music video shows—is significantly correlated (with small to moderate effect sizes), with higher levels of body dissatisfaction and with higher scores on eating disorder components in females. Of course, such correlations do not legitimize any conclusions about causality, although it is worth remembering that lack of correlation means lack of a causal relationship. Consequently, we turn our attention to experimental and longitudinal, prospective studies.
<table>
<thead>
<tr>
<th>Study</th>
<th>Objective</th>
<th>Main characteristics of studies revised</th>
<th>Effects on body image of:</th>
<th>Main results</th>
<th>Effect of media exposure on:</th>
</tr>
</thead>
</table>
| Cafri et al.  | To assess the relationship between three sociocultural factors—Internalization of a thin ideal (I), awareness of a thin ideal (A), and perceived pressures to be thin (PP)—and body image | 22 correlational studies; 7,079 participants for (I); 4,742 for (A); and 1,998 for (PP). Average age ranged from 10.25 to 26.50. Time period: 1990 to 2005 | - Internalization of a thin ideal: Moderate to large effect. Age and ethnicity had nonsignificant effects as a moderators  
- Awareness of a thin ideal: Moderate effect. Age and ethnicity had nonsignificant effects as a moderators  
- Perceived pressures to be thin: Moderate to large effect. |                                                                                                                                                           | - Body image dissatisfaction: Small effect. Moderator analyses were not warranted.  
- Internalization of the thin ideal: Small effect. Larger effects were found in the correlational literature than in the experimental literature, and for studies published in the 2000s compared with those in the 1990s. Type of media exposure was nonsignificant as moderator.  
- Eating behaviors and beliefs: Small effect. Slightly stronger effects were found for adults (age > 19) than for adolescents (age 10–18), and for generalized media use as opposed to television or magazine use. Much stronger effects found for published versus unpublished manuscripts. |
| Grabe et al.  | To examine experimental and correlational studies testing the links between media exposure and three criteria: women's body dissatisfaction, internalization of the thin ideal, and eating behaviors and beliefs | 77 studies; 15,047 participants. Time period: 1975 to January 2007                                      |                                                                                                                                                               |                                                                                                                                                           |                                                                                                                                                                                                                                                                   |
| Groesz et al. | To assess the effect of experimental manipulations of the thin beauty ideal, as portrayed in the mass media, on females' body image | 25 experimental studies; 2,292 participants. Time period: 1983 to 2000.                                  | Effect of media exposure on: Body image was significantly more negative after viewing thin media images than after viewing images of either average size models, plus size models, or inanimate objects. Small effect. Stronger effects were observed for participants who were vulnerable to activation of a thinness schema versus who were not, and for participants less than 19 years of age versus 19 and over. |                                                                                                                                                           |                                                                                                                                                                                                                                                                   |
| Holmstrom     | To examine the effects of media on body image                               | 34 studies (21 experimental and 13 correlational); 5,843 participants. Average age ranged from 9 to 26.5. Time period: 1990 to January 2002. | Effect of media exposure on: Body image: Null effect. There was virtually no difference in effect size between experimental and survey studies. Effects of possible moderators as media measures (magazine, photo, television, mass media, movies, and computer), comparison stimuli in experimental studies (average weight women, overweight women, nonhuman images) or length of exposure in experimental studies were conducted, but the small number of studies in each category calls into question their validity. |                                                                                                                                                           |                                                                                                                                                                                                                                                                   |

*Criteria proposed by Cohen (1988) for evaluation of effect sizes: 0.2 (d) or 0.1 (r) indicates a small effect; 0.5 (d) or 0.3 (r) a moderate effect; and 0.8 (d) or 0.5 (r) a large effect.  
Groesz et al. (2002) review was conducted exclusively with experimental research; reviews by Grabe et al. (2008) and by Holmstrom (2004) combined experimental and cross-sectional research. Of the 77 studies included in Grabe et al. (2008), 18 overlapped with the 25 studies included in Groesz et al. (2002) review (72% overlapping)—both found a significant association and the final average effect size was similar, suggesting a robust finding. In contrast, Holmstrom's (2004) review of 34 studies failed to replicate this association. In this review, 24 studies (70.5%) overlapped with Grabe et al. (2008) and 16 (65%) with Groesz et al. (2002). Interestingly, Holmstrom's review (the only one of the four that did not support a solid association between media, body image, and disordered eating) came from the mass communication research field.
EXPERIMENTAL STUDIES

Reviews of Laboratory Research

Groesz, Levine, and Murnen (2002) carried out a meta-analysis of 25 experimental studies that assessed the effects on “state” body satisfaction in girls and women of controlled exposure to portrayals of the thin beauty ideal in media photographs or video (e.g., television commercials). In general, immediate ratings of body satisfaction become significantly lower after a female sees images of the thin beauty ideal than after she sees images of women with average weight, women with fat bodies, or inanimate objects. The effect sizes found were low to moderate ($d = 0.31$), becoming moderate to high ($d = 0.50$) in the samples of adolescent girls and women with a previous history of body dissatisfaction or eating disorders. The effect was also slightly more pronounced in girls under age 19 ($d = 0.36$).

A recent meta-analysis by Grabe et al. (2008) located an additional 19 experimental studies of magazine-based images, as well as 8 more experimental studies of the immediate effects of controlled presentations of images from television shows and commercials. The extent of the effect size for the now larger sample of experimental studies has to be inferred, however, for the following reason: Grabe et al. reviewed a total of 77 studies and in their analysis considered the type of design (experimental vs. correlational) as a moderator variable. The effect size for the relationship between media and body dissatisfaction for all studies (correlational and experimental) was $d = 0.28$ ($k = 90$). However, because significant heterogeneity was not present, moderator analyses, including study design, were not warranted. Grabe et al. also reported that, although there was substantial heterogeneity, the $d$s for experimental effects (across magazines, television, and media in general) on internalization and on eating behaviors and beliefs were 0.21 and 0.36, respectively. With respect to heterogeneity of media effects, it is worth noting also that, in several experimental studies with samples of high school girls and college women, a significant minority of females who were exposed to images of attractive models from magazines exhibited an increase in state body satisfaction. In this regard, one meta-analysis of a mixture of experimental and cross-sectional studies failed to find a relationship between media exposure to thin images and body image (Holmstrom, 2004).

External Validity

Experimental designs implemented in laboratory contexts are open to the criticism of having low external validity in part because the typical experiment arranges for only brief exposures to the target stimuli, followed by assessment of short-term (“state”) effects. Thus, researchers conducting experiments are, typically, only able to speculate about the cumulative,
“dispositional” effects of media influence over the long term. To address this concern, Hargreaves and Tiggemann (2003) examined the long-term effects of exposing a group of 17-year-old Australian girls to 20 television commercials (30 seconds each) that showed actresses representative of current thinness and beauty ideals. Those girls who had the highest levels of “state” body dissatisfaction immediately after seeing the ads tended to have the highest levels of “trait” body dissatisfaction and of desire for thinness 2 years later. Hargreaves and Tiggemann argued that the negative short-term effects observed in laboratory contexts may represent a marker for subsequent vulnerability to sociocultural pressure to be thin. These findings are indeed consistent with sociocultural models of disordered eating, but they need to be replicated with larger and varied samples and so should be interpreted with caution, as the sample size was small.

The important issue of external validity was also addressed by Stice, Spangler, and Agras (2001). These researchers constructed an unusual naturalistic experiment for assessing long-term effects of exposure to media images of the thin beauty ideals on body dissatisfaction, negative affect, internalization of the thin beauty ideal, restrictive dieting, and bulimic symptoms. Capitalizing on the design of a separate risk factor study, Stice et al. randomly assigned 219 adolescent girls to a condition in which each received a prize of a subscription to a fashion magazine for 15 months, or to a nonsubscription condition. At 20-month follow up, there were no significant differences between the experimental and control conditions in any of the dependent variables. However, those girls who received the fashion magazine and who initially reported lower levels of social support showed a significant increase in body dissatisfaction, dieting, and bulimic symptoms. These findings may reflect the interaction, or transaction, between the immediate social environment—family and peers—and the impact of mass media on internalization of the thin beauty ideal and, in turn, on body dissatisfaction (see Levine, Smolak, & Hayden, 1994; Smolak & Levine, 1996). As Stice et al. (2001) suggest, “perhaps exposure to thin ideal images does not produce negative effects for adolescents who feel accepted in their immediate social environment” (p. 285).

Another naturalistic study relevant to external validity was conducted by Becker, Burwell, Gilman, Herzog, and Hamburg (2002), who examined the impact of television on disordered eating attitudes and behaviors in a sample of adolescent girls from the Pacific islands of Fiji. These researchers observed that 3 years after television reception became widespread, 11.3% of girls reported having vomited with the aim of controlling their weight, compared to 0% before the advent of television on the islands. Likewise, the percentage of girls with high levels of disordered eating attitudes more than doubled during this period, rising from 13% to 29%. Further, once television had been introduced, 74% of girls reported “feeling fat,” and those with television at home were three times more likely to present disordered
eating attitudes. It is interesting to note that the traditional Fijian cultural aesthetic reflects a preference for robust bodies, and certainly does not endorse individual efforts to shape the body through diet or exercise. Becker et al.'s study strongly suggests that mass media, and especially television, not only have a substantial impact on adolescents, but exert their influence within a short space of time, despite the traditional values of a given culture (see also Bilunka & Utermohlen, 2002, for an example in the Ukraine).

In brief, findings from experimental studies indicate that exposure to images of the thin beauty ideal featured in the media—and particularly in magazines, television shows and commercials—increases body dissatisfaction, internalization of thin ideal, and disordered eating behaviors and beliefs. Effect sizes are small to moderate. However, there are some factors that seem to moderate this effect. These include prior body dissatisfaction and internalization of the slender beauty ideal, as well as low social support from peers and family, and age. To further summarize and organize the principal findings from both cross-sectional and experimental studies, Table 1 presents the findings of the four published meta-analysis to date that have reviewed the effects of media exposure on body image and disordered eating in females (see Barlett et al., 2008, for a parallel review of media effects in males). Three publications examined the specific effects of media exposure on body image (Grabe et al., 2008; Groesz et al., 2002; Holmstrom, 2004), whereas the other (Cafri et al., 2005) examined the impact of individual variables that mediate the effects of media, most notably internalization of a thin ideal. In general, the effect sizes reported by Cafri et al. are larger than the others, highlighting the great importance of moderating variables and of individual variables and mediator processes in how body image is influenced by media (see also Dittmar, Halliwell, & Stirling, 2009). We will return to the issue of mediators and moderators of media effects in the sections addressing “processes” and moderators, including ethnicity.

Media Literacy

If media exposure and its potential effects are a causal risk factor, then experimental use of “media literacy” techniques and programs to reduce or eliminate negative media influences should eventually reduce or prevent negative body image and other processes that eventually result in eating disorders. Literature on the nature of media literacy and on its effects has recently been reviewed in detail elsewhere (see, e.g., Levine, 2009; Levine & Murnen, 2009; Levine & Smolak, 2006, ch. 13). Briefly, the findings of laboratory studies, both brief, in vivo interventions and longer, more intensive programs, are promising but inconclusive. To date, there have been no direct, well-controlled, long-term studies of whether media literacy in particular can prevent development of negative body image and the spectrum of disordered eating. We can with confidence state that (a) brief training in media literacy as
a critical social perspective can mitigate the immediate (or “state”) negative effects of exposure to the thin ideal; and (b) more systematic, intensive interventions over days or weeks can significantly reduce one important dispositional risk factor: internalization of the thin beauty ideal.

LONGITUDINAL PROSPECTIVE STUDIES

If X (e.g., media exposure) is a variable and causal risk factor for criterion variable Y (e.g., negative body image), then two criteria should be met: X should precede Y, and X (at Time 1) should predict subsequent changes in level of Y (i.e., the level of Y at Time 2, controlling for level of Y at Time 1; Kraemer et al., 1997; Stice, 2002). In other words, longitudinal prospective studies are a very important aspect of exploring the causal status of a possible risk factor, especially given the necessity (for the required statistical power) of a large sample and a long follow up (Field, 2004). However, very few studies in this field have approached fulfillment of such conditions. Given the relevance of this type of design, Table 2 presents the main characteristics and findings of the most important longitudinal studies.

Over a period of 3 years, The McKnight Investigators (2003) assessed potential risk factors for eating disorders in a sample of 1,103 girls who were initially ages 10–15. The self-reported influence of mass media, which formed part of a multidimensional factor called “thin body preoccupation and social pressure,” predicted the onset of eating disorders in young girls 3 years later, when all were in high school (note that ethnicity moderated this relationship, depending on the study site; see Table 2). This finding is supported by a more recent longitudinal study. In a sample of over 1,300 girls in middle school and high school, those who “sometimes” or “often” read “magazine articles in which dieting or weight loss are discussed” (p. 32) were twice as likely to be engaged in unhealthy weight-control behaviors and three times as likely to be engaged in extreme weight-control behaviors 5 years later, even when initial weight-control behaviors, weight importance, demographic features, and body mass index were statistically controlled (van den Berg, Neumark-Sztainer, Hannan, & Haines, 2007).

A research team that included one of the principal McKnight investigators (C. B. Taylor) conducted three longitudinal studies with a sample of nearly 7,000 girls aged 9 to 14 (Field, Camargo, Taylor, Berkey, & Colditz, 1999; Field, Camargo, Taylor, Berkey, Roberts, et al., 2001; Field, Javaras, et al., 2008). Regardless of initial age and BMI level, at one-year follow-up girls who consciously tried to look like the female ideal presented on television, in films, or in magazines were 1.6 to 1.9 times more likely to have concerns about their weight, to be continually dieting, and/or to be “hooked” on purging behaviors. At 7-year-follow-up females of all ages who were trying to look like females in the media were 1.5 times more likely to start
**TABLE 2** Representative Prospective Studies of Media Effects on Body Image and Disordered Eating

<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Age range (mean at baseline)</th>
<th>Follow up</th>
<th>Media type</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stice (1998) - Study 2 - USA</td>
<td>218</td>
<td>girls 16–18</td>
<td>9 months</td>
<td>Television and magazines</td>
<td>Media social reinforcement prospectively did not predict the onset of binge eating and purging. Media modeling of abnormal eating behavior was not associated with concurrent bulimic symptoms and did not predict the onset of binge eating and purging.</td>
</tr>
<tr>
<td>Field, Camargo, et al. (1999) USA</td>
<td>6982</td>
<td>girls 9–14</td>
<td>1 year</td>
<td>Television, movies and magazines</td>
<td>Independent of age development, trying to look like females on television, in movies, or in magazines was predictive of beginning to purge at least monthly.</td>
</tr>
<tr>
<td>Field et al. (2001) USA</td>
<td>6770</td>
<td>girls 9–14, boys 5287</td>
<td>1 year</td>
<td>Television, movies and magazines</td>
<td>Independent of age and body mass index, both girls and boys who were making a lot of effort to look like same-sex figures in the media were more likely than their peers to become very concerned with their weight. Girls who were making greater efforts to look like females in the media were more likely than their peers to become constant dieters.</td>
</tr>
<tr>
<td>Martinez-Gonzalez (2003) Spain</td>
<td>2862</td>
<td>girls 12–21</td>
<td>18 months</td>
<td>Television, girls’ magazines, radio</td>
<td>Frequently reading girls’ magazines or listening to radio programs was related to a higher risk of eating disorder onset at the beginning of follow up. No association was found for television viewing.</td>
</tr>
<tr>
<td>The McKnight Investigators (2005) USA</td>
<td>1103</td>
<td>6th–9th grade (11–15)</td>
<td>3 years</td>
<td>“Media modeling” in general</td>
<td>Higher scores on the multidimensional factor <em>thin body preoccupation and social pressure</em> measuring concerns with weight, shape, and eating (including media modeling, social eating, dieting, and weight teasing) significantly predicted onset of eating disorders in young women. Being Hispanic moderated the onset of eating disorders at the Arizona but not the California site. In the Hispanic sample, a risk factor for new-onset eating disorders cases was <em>thin body preoccupation and social pressure</em>. In the non-Hispanic sample, only <em>thin body preoccupation and social pressure</em> was significantly related with new-onset eating disorders cases.</td>
</tr>
</tbody>
</table>

*(continued)*
<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Age range (mean at baseline)</th>
<th>Follow up</th>
<th>Media type</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presnell et al. (2004) USA</td>
<td>293 girls, 238 boys</td>
<td>16–19 (17)</td>
<td>9 months</td>
<td>Media in general</td>
<td>Elevations in perceived pressure to be thin from media did not predict increases in body dissatisfaction.</td>
</tr>
<tr>
<td>McCabe &amp; Ricciardelli (2005)</td>
<td>236 girls, 207 boys</td>
<td>8–12 (9.24 girls/9.26 boys)</td>
<td>16 months</td>
<td>Television</td>
<td>Perceived pressures from the media to lose weight predicted body dissatisfaction only among boys. Perceived media messages to lose weight predicted strategies to decrease weight only for boys. The media played the strongest role in shaping strategies to increase muscle among girls, with perceived media messages to lose weight in the long term predicting strategies to increase muscle.</td>
</tr>
<tr>
<td>Dohnt &amp; Tiggemann (2006b) Australia</td>
<td>97 girls</td>
<td>5–8 (6.91)</td>
<td>1 year</td>
<td>Appearance-focused television shows (or magazines)</td>
<td>Watching appearance-focused television programs (but not reading appearance-focused magazines) prospectively predicted appearance satisfaction.</td>
</tr>
<tr>
<td>Harrison &amp; Hefner (2006) USA</td>
<td>257 girls</td>
<td>2nd–4th grade (8.72)</td>
<td>1 year</td>
<td>Television and magazines</td>
<td>Controlling for age, race, perceived body size, and body ideals and disordered eating measured at Time 1, television viewing at Time 1 (but not reading health and fitness magazines, fashion magazines, or sports magazines) predicted increased disordered eating and a thinner future body ideal at Time 2. None of the media variables predicted a thinner current body ideal at Time 2.</td>
</tr>
<tr>
<td>van den Berg et al. (2007) USA</td>
<td>1386 girls, 1130 boys</td>
<td>7th–12th grade (12–18)</td>
<td>5 years</td>
<td>Magazines</td>
<td>For females adolescents, independent of weight-control behaviors, weight importance, body mass index, and demographic covariates, the most frequent readers (compared with those who did not read) of magazine articles about dieting and weight loss were at significantly higher risk for engaging in unhealthy and extreme weight-control behaviors. Being a frequent reader of these magazines was not associated prospectively with binging eating in either girls or boys. Those females who &quot;sometimes&quot; or &quot;often&quot; read &quot;magazine articles in which dieting or weight loss are discussed&quot; were twice as likely to be engaged in unhealthy weight-control behaviors five years later, even when initial behaviors, demographic features, and body mass index were statistically controlled. There were no significant associations for either weight-control behaviors or psychological outcomes for male adolescents.</td>
</tr>
<tr>
<td>Field et al. (2008) USA</td>
<td>6916 girls, 5618 boys</td>
<td>9–15</td>
<td>7 years</td>
<td>Television, movies and magazines</td>
<td>Trying to look like persons in the media was a predictor of starting to purge and binge eating among females of all ages, but not among boys.</td>
</tr>
</tbody>
</table>

This table presents only results pertaining to media effects on body image and disordered eating. For more detailed results related with other variables studied, see the original studies.
purging and 2.2 times more likely to binge eat (Field, Javara s, et al., 2008). This is one of the few studies published in the field of eating disorders that collected data over a very long period of time and in a very large sample. Similarly, a study of almost 3,000 Spanish girls and young women ages 12 to 21 assessed over a period of 18 months found that frequent readers of fashion magazines for adolescents were 2.1 times more likely to develop an eating disorder (Martínez-González et al., 2003). Interestingly, although no significant relationship was found between the number of hours they watched television and risk of an eating disorder, a significant relationship was indeed observed between listening to the radio for more than an hour a day and the risk of developing such disorders. Martínez-González et al. noted, as a possible explanation of these results, that radio programs transmit many messages, primarily through advertising, in relation to “the perfect figure” and how to achieve it.

In contrast to the findings in Martínez-González et al.’s (2003) survey of adolescents and young adults, early exposure to thin-ideal television appears to predict subsequent increases in body image problems. In a study of Australian girls ages 5–8, Dohnt and Tiggemann (2006b) found that the number of appearance-focused television programs (but not appearance-focused magazines) viewed predicted a decrease in appearance satisfaction one year later. A one-year longitudinal study with 257 preadolescent girls (M_age = 9 years) found that exposure to television, but not to magazines, predicted a significant increase in disordered eating (Harrison & Hefner, 2006). According to the researchers, the fact that children watch far more adult-oriented television than they read adult-oriented magazines helps explain why studies carried out in preadolescent populations (although these are extremely scarce) yield a different pattern of results than do studies of adolescent and young adult populations, for whom magazines are the media format that most influences the internalization of the thin beauty ideal. It is also very likely that adolescents and young adult females, for various developmental reasons, are more inclined to engage in the important mediating process of social comparison (Levine & Smolak, 1996; Thompson, Heinberg, et al., 1999; Tiggemann, Polivy, & Hargreaves, 2009; Trampe, Stapel, & Siero, 2007).

In thinking about media influences, it is important to note that longitudinal, prospective studies with much smaller samples (typically around 300 preadolescent and adolescent girls) suggest that the messages transmitted by parents (especially mothers) and by friends (primarily same-sex friends) have more influence on awareness and internalization of the thin beauty ideal and on body dissatisfaction and unhealthy weight-control behaviors than do mass media (McCabe & Ricciardelli, 2005; Presnell, Bearman, & Stice, 2004; Stice, 1998). In terms of social cognitive theory, this may be due to the fact that proximal messages transmitted directly and indirectly by people who are important to these girls (e.g., mothers and friends)
are given priority over more distal images and messages; that is, women in mass media are seen as more symbolic and may not be as personally significant for these girls. These “models” are not as “immediate a presence” or are dissimilar in ways that lower their value for observational learning and as “standards” for social comparison (Levine & Smolak, 1996, 2006; Sands & Wardle, 2003; but see Jones, Vigfusdottir, & Lee, 2004). However, this explanation does not exclude the influence, albeit indirect, of the media, since messages conveyed and reinforced by communications from peers and family probably reflect messages they have assimilated from the media (Levine & Harrison, 2009).

In summary, longitudinal studies indicate that the greater exposure to the messages conveyed by media, particularly those that transmit messages in relation to thin ideal and how to achieve it from magazines, television, and radio, the more likely females are to develop disordered eating behaviors and concerns about weight (see Table 2). As is the case for cross-sectional (correlation-based) and experimental studies, effects appear to depend to some extent on the type of media in interaction with age. Specifically, television has a stronger effect on children, whereas magazines are more influential for adolescent and adult females. Peers and family also appear to act as moderating variables of this effect.

**PROCESSES**

Research on the effects of the media on body satisfaction and on eating attitudes and behaviors has increased substantially in recent years, yet much work remains to be done in order to clarify the processes through which media exercise their influence (see Dittmar, 2009; Harrison & Hefner, 2008; Levine & Harrison, 2009; Levine & Murnen, 2009; Tiggemann & McGill, 2004). We do know that the process as a whole is not subliminal, although certain aspects (e.g., activation of social comparison and of self-target discrepancies) may be automatic (Levine & Harrison, 2009). Tiggemann and colleagues in Australia (e.g., Tiggemann & Slater, 2004) have shown that music videos, which are saturated with salient (supraliminal) visual images and auditory cues pertaining to appearance, gender, sexuality, and objectification, are particularly potent activators of body dissatisfaction. A considerable amount of data indicates that the negative impact of media images depends on the conscious and, in many instances, cumulative processing of unambiguous, direct, and “attractive” social messages (Harrison & Hefner, 2008; Levine & Harrison, 2009).

In the fields of body image and eating disorders, it is postulated that there are at least three processes that mediate the relationship between the media, body dissatisfaction, and disordered eating behaviors and moderate media effects on these variables. These processes are: internalization of the
thin beauty ideal; social comparison; and activation of the thin-ideal schema (Dittmar et al., 2009; Halliwell & Dittmar, 2005; Levine & Harrison, 2009; Tiggemann et al., 2009; Trampe et al., 2007). Even so, and despite the fact that progress is being made (see, e.g., Dittmar et al., 2009; Vartanian, 2009), knowledge is still lacking on the number and the time sequence of major processes, their order of importance, and how they mediate as well as moderate the impact of various sociocultural factors, including mass media. Two new processes, the “activation of weight-shape-related self-ideal discrepancy” (Dittmar et al., 2009; Harrison & Hefner, 2008) and “self-concept clarity” (Vartanian, 2009), are being considered as possible mediating and moderating processes, and preliminary evidence indicates that these are deserving of further research attention.

Internalization of the Thin Beauty Ideal

Stice’s (1994; Stice, Nemeroff, & Shaw, 1996) Dual-Pathway Model of bulimia nervosa and Thompson et al.’s (2004) Tripartite Model of disordered eating both propose that internalization of the thin beauty ideal mediates the relationship between exposure to the media (and other sociocultural influences) and resultant body dissatisfaction and disordered eating symptoms (see also Thompson & Stice, 2001). In this regard, it is noteworthy that several experimental studies in Great Britain and the United States have found that only “high internalizers” experience heightened body dissatisfaction (Dittmar et al., 2009; see Levine & Murnen, 2009, for a review).

Consistent with these sociocultural models, a study of 14- to 16-year-old Swiss girls by Knauss, Paxton, and Alsaker (2007) found that perceived pressure from the media, internalization of the thin beauty ideal, and body dissatisfaction were highly inter-correlated (all rs > .60). Jones et al.’s (2004) cross-sectional study of adolescents ages 11–14 revealed that girls, as compared with the boys, were more invested in appearance-oriented magazines, were more likely to internalize the beauty ideals in them, and had greater body dissatisfaction. In fact, for girls, exposure to appearance-related magazines and to appearance conversations by peers each predicted body dissatisfaction through the mediator of internalization of the thin beauty ideal. The path analytic model for girls explained 48% of the variance in body dissatisfaction.

These studies reflect a robust finding. Cafri et al.’s (2005) meta-analysis (see Table 1) of 31 effect sizes from 18 studies found an r of .50 (d = 1.15) for the correlation between thin-ideal internalization and negative body image (see also Stice, 2002). This is considered a large effect according to Cohen’s (1988) criteria, and it is significantly greater than the r of .29 (d = 0.61, based on 25 effect sizes) for awareness of the thin ideal. Engeln-Maddox (2006) found that young women who have a clear and strong expectation that looking like a media ideal would transform their lives in multiple, positive
Krones, Stice, Batres, and Orjada (2005) have argued that internalization of
the thin beauty ideal promotes body dissatisfaction specifically through
the process of social comparison. Along similar lines, research assessing
Thompson et al.’s (1999, 2004) tripartite influence model has found that both
internalization of the thin beauty ideal and social comparison mediate the rela-
tionship between sociocultural influences (parents, peers, and media) and
body dissatisfaction and disordered eating behaviors (Shroff & Thompson,
2006; van den Berg, Thompson, Obremski-Brandon, & Coover, 2002). How-
ever, it remains unclear whether the two processes operate simultaneously
or whether one precedes the other.

Two provocative studies in this regard were recently conducted by
Vartanian (2009). American college females who reported an unstable, poorly
defined sense of self were more likely to report internalization of the thin
beauty ideal and, in turn, greater levels of negative body image and dieting
concerns. Moreover, as predicted, it appears that such low “self-concept
clarity” makes young women more prone to public self-consciousness and
conformity to social norms. Although it remains to be tested, it follows from
Vartanian’s (2009) work that low self-concept clarity would predispose one
to both heightened social comparison processes and internalization of the
thin beauty ideal, acting, possibly, as a moderator of the effect of media
exposure.

In two recent, well-controlled studies, Dittmar et al. (2009) demonstrated
that young women who had already internalized the thin beauty ideal were
the only participants to exhibit increased negative affect concerning their
bodies following exposure to the thin beauty ideal. Not only was internal-
ization of this ideal a potent moderator of the classic contrast effect, this effect
was fully mediated by activation of weight-related self-ideal discrepancy and
was not dependent on whether the context of exposure emphasized the
thinness of the models. The latter finding was consistent with previous re-
search by Dittmar and colleagues (reviewed in Dittmar et al., 2009) indicating
that internalizers will activate concerns about the self-ideal discrepancy even
when they are not paying a great deal of attention to slender models.

Social Comparison Processes

Social comparison theory, originally formulated by Festinger (1954), refers to
people’s tendency to compare themselves to others with respect to certain
attributes, especially when the characteristics (e.g., beauty or sexiness) are
important and the relevant standards or criteria for evaluation are ambiguous
(Trampe et al., 2007). Applied to the context of media, self-perception of
attractiveness, and body image, social comparison denotes the process in
which women compare themselves with the idealized, symbolic images, and,
on finding that they “fail” to meet the social and cultural standards, show increased body dissatisfaction. For example, Hargreaves and Tiggemann (2004) exposed Australian girls ages 13–15 to a long series of television commercials depicting either idealized images or performers of “normal” appearance. As predicted, girls who viewed images of the thin ideal were significantly more likely than girls in the control condition to compare their own appearance to that of the women in the commercials and to react to the images with negative feelings. Experiments conducted in Great Britain by Dittmar and Howard (2004) and by Halliwell and Dittmar (2004) demonstrated that it is the thinness of fashion models, not their attractiveness, that accounts for thin-ideal media’s immediate negative effects on body image in girls.

There is apparently a very complex interplay between the potential standard for comparison (i.e., the social stimulus), the perceiver’s self-concept, the inclination toward and process of social comparison, and the impact of mass media, as well as other sociocultural factors (see Levine & Smolak, 1996; Tiggemann et al., 2009; Vartanian, 2009). For example, a marketing research study by Richins (1991) found that if consumers, specifically women, consider professional models as a separate category, there were no changes in their conception of beauty after seeing the ads. On the other hand, if female consumers considered the professional models to represent in some way the possibilities for a majority of women (Thompson & Heinberg, 1999), then they showed the standard post-exposure contrast effect (see Grabe et al., 2008; Groesz et al., 2002), at least temporarily, in the way they more negatively judged themselves and the rest of the population (Richins, 1991).

Women and adolescent girls who tend to compare themselves with the beauty ideals represented in the media—and in peers, family, and even strangers—are more likely to show greater body dissatisfaction and disordered eating behaviors than those who tend not to involve themselves in the process of social comparison, especially if the tendency is to compare oneself “upward” against people whom society would tend to consider more attractive (O’Brien et al., 2009; Thompson, Heinberg, et al., 1999). A recent series of studies by Trampe et al. (2007) focused on undergraduate women who were already dissatisfied with, and presumably self-conscious about, their own bodies. As predicted, these women tended to compare their appearance to a wide range of body-shape standards, including other students, fashion models, and celebrities. Further, relative to women who tended to be more satisfied with their own bodies, the women with high levels of body dissatisfaction were, as predicted, negatively affected by exposure to and comparison with thin, physically attractive people, whether that person was portrayed as a model or not. In fact, the women with negative body image reported increased (“state”) body dissatisfaction after seeing a drawing of a thin vase versus a fatter, rounded vase. It is possible that these women have a poorer self-concept—and lower self-concept clarity (Vartanian, 2009)—underlying their negative body image.
Trampe et al.’s (2007) findings suggest that the tendency of women with higher levels of body dissatisfaction to make broad and unhealthy social comparisons reflects the fact that their body-relevant self-schema (Hargreaves & Tiggemann, 2002), or their self-schema (self-consciousness) in general (Vartanian, 2009), is activated more readily. However, “the process through which girls and boys determine the need to make social comparisons, select the targets, make the comparisons and assess the information available, is an area of great importance for future research on the effects of the media” (Levine & Harrison, 2004, p. 700; see also Trampe et al., 2007).

Schema Activation

Social cognitive and cognitive behavioral theorists have cataloged the various direct and indirect ways that people receive information—from the media, parents, peers, coaches, to name but a few—about beauty, food, eating, weight control, and other aspects related to physical appearance. In the process of making meaning and of learning predictive relationships, such information is distilled and arranged into a schema, that is, a mental structure that helps people to organize their interactions with the world in a stable and consistent fashion (see Levine & Smolak, 2006, ch. 6). Based on media messages, gender socialization research, and studies of the psychopathology of eating disorders, Smolak and Levine (1994, 1996; Levine & Smolak, 1996, 2006) have proposed that, beginning as early as middle childhood, girls form a “thinness schema.” This cognitive structure, which is certainly connected to and affected (cathected) by emotion-inducing memories and conclusions, is a combination of information and beliefs referring to the self and one’s self-worth, and to information extracted from sociocultural influences.

According to this schema theory, to a greater or lesser degree, females are likely to embrace beliefs, memories, assumptions, and feelings revolving around “ideas” such as (a) beauty constitutes the primary goal in a woman’s life; (b) a slim body is a fundamental component of beauty, physical health, success, and happiness; (c) by nature, women feel anxiety, shyness and shame in relation to their bodies; (d) women can transform and renew themselves thanks to the technology of fashion, dieting, and exercise; and (e) fatness reveals a loss of personal control and is a sign of failure (see Levine & Smolak, 2006). Mass media are presumed to play a role in both the constitution of the schema and its activation once it is formed. As Dittmar et al. (2009) indicate, the results of their study of “internalizers” and weight-related self-discrepancies can be interpreted in terms of schema activation. Images of slender models activated self-focused, negative thoughts about the gap between one’s self-perceived body image and the cultural ideals (see also Harrison & Hefner, 2008). In a self-perpetuating but ultimately self-defeating process, internalizers of the thin beauty ideal are cognitively and emotionally predisposed to “think ideal, feel bad,” and yet still “think ideal.”
One aspect of the “thinness schema” that is recognized by the American Psychiatric Association’s (2000) criteria for an eating disorder is the “undue influence of weight and shape on self-evaluation” (see Criterion C, p. 589; and Criterion D, p. 594). In a study of Australian girls, ages 15 through 18, Hargreaves and Tiggemann (2002) found that, compared to control conditions, appearance-focused commercials did indeed produce greater activation of appearance-related self-schema. With regard to schema as a moderator, these commercials also generated more overall appearance dissatisfaction for those girls who began the study with a more extensive, emotionally charged, appearance-related self-schema. With respect to mediation, the negative (contrast) effect of the thin beauty ideal on girls’ appearance satisfaction was partially mediated by schema activation.

CONCLUSIONS

Based on this review and other, related analyses (see, e.g., Harrison & Hefner, 2008; Hogan & Strasburger, 2008; Levine & Harrison, 2004, 2009; Levine & Murnen, 2009; Thompson & Heinberg, 1999; Thompson et al., 1999) we can state the following with a fair degree of confidence: Mass media are an extremely important source, if not the principal source, of information and reinforcement in relation to the nature of the thin beauty ideal, its importance, and how to attain it. Figure 1 provides a visual synthesis of the relationships between the constructs discussed in this review. Our intent is to stimulate further modeling of media effects and to summarize potential causal pathways that have a theoretical basis, that are supported by empirical findings, and that have meaningful implications for prevention and perhaps treatment.

There is still a good amount of research remaining, but evidence is accumulating that repeated exposure to media and to both the direct and indirect (via media’s effects on peers, parents, physicians, etc.) pressure from media to be thin constitute a risk factor for body dissatisfaction, concerns over weight, and disordered eating behaviors in adolescent girls and young women. Relatively little research has addressed the intersection of sociocultural factors, but it appears that a confluence of media, family, and peer factors increases the substantial risk posed by media alone (Levine et al., 1994; Jones et al., 2004).

The impact of media depends on a number of source and receiver/perceiver factors, including, most prominently, ethnicity and as yet poorly understood developmental factors. Research to date indicates fairly consistently that, relative to watching television in general (except music video shows), reading fashion and “glamour” magazines seems to have a greater influence, for adolescent girls and young women, on internalization of the thin beauty ideal, on body dissatisfaction, and on disordered eating behav-
FIGURE 1 Model of the mass media as a risk factor for body dissatisfaction, weight concerns and disordered eating behaviors. Variables that appear to moderate are age (and/or developmental status), self-esteem, ethnicity, parents, peers, and media type. Variables that appear to mediate are contained under “Processes.” The processes in bold have considerable empirical support, whereas the process in italics and in smaller text has some support but is in need of further investigation.

Conversely, in children, television in general appears to have more influence than magazines, probably because children watch more adult-oriented television (and movies) than they read adult-oriented magazines and are more able and motivated to process (and internalize) the salient messages about gender, weight, shape, and such, that television so readily provides (Harrison & Hefner, 2008; Levine & Murnen, 2009). Internalization of the thin beauty ideal, social comparison, and activation of the thinness schema are clearly among the processes which mediate the effects of the media on body dissatisfaction, weight concerns and disordered eating behaviors.

Furthermore, there are some variables that seem to moderate media effects. Girls and women who already show greater internalization of the thin beauty ideal, who already tend to compare themselves with ideal figures, who have formed the thinness schema and, therefore, show greater body dissatisfaction or disordered eating, are more likely to respond negatively to the media content we have been discussing. Sadly, they also appear to be more motivated to seek out mass media for guidance and inspiration.
and self-evaluation. This paradox is particularly important when thinking about the resources of the World Wide Web, including pro-anorexia Web sites and the efforts of the diet industry (Bardone-Cone & Cass, 2006, 2007; Harshbarger, Ahlers-Schmidt, Mayans, Mayans, & Hawkins, 2009). Other potentially important moderating variables that warrant further research are age (girls under 19 appear to be more vulnerable to the influence of the media than older girls and women) and low self-esteem and low self-concept clarity (girls with low self-esteem appear to be more vulnerable to the adverse effects of the media). Moreover, parents and peers play an important role in the transmission, reinforcement, and modeling of the thin beauty ideal and disordered eating behaviors and beliefs or—in an opposite sense, their social support could be a protective factor from the adverse effects of the media.

Ethnicity as a Moderator

A meta-analytic review by Roberts, Cash, Feingold, and Johnson (2006) found that, in general, Black women have higher levels of body satisfaction and weight satisfaction than White women. Moreover, although actual evidence from content analyses is lacking, it appears that the vast majority of females who constitute the cultural ideals of beauty, sexiness, and desirability in the mass media and other avenues of social influences are White, or at least not dark Black. This suggests that Black women are affected differently by the pervasive, (pre)dominant images of female physical attractiveness in the mass media.

The research evidence pertaining to this matter is both woefully sparse and, perhaps not surprisingly, equivocal (see Harrison & Hefner, 2008, and Levine & Smolak, 2010, for reviews). On the one hand, a set of studies provides evidence that Black girls and women are just as vulnerable to effects of images represented in the media too (see, e.g., Borzekowski et al., 2000; Botta, 2000; Gordon, 2008). On the other hand, another set of studies indicates that Black girls are not negatively affected (or not as negatively affected) by the ideal most often represented in the media because they do not compare themselves (as often) with these “White image” (DeBraganza & Hausenblas, 2010; Frisby, 2004; Jefferson & Stake, 2009; Milkie, 1999; Schooler, Ward, Merriwether, & Caruthers, 2004). For example, Frisby found that, regardless of their initial levels of body esteem, young Black college students did not report a decline in state body satisfaction following experimental exposure to White models in advertisements. However, those Black students who had low initials levels of self-esteem and who saw Black models from ads did show a significant decline in state body satisfaction. Recently, an experiment conducted by DeBraganza and Hausenblas found evidence that mirrors, to some extent, that reported by Frisby. These researchers showed that ethnicity moderates the expected effects of viewing model ideals
on body dissatisfaction. Young Black college students showed no significant changes in body dissatisfaction after exposure to the White ideals, whereas White women reported significantly lower body dissatisfaction scores.

The findings of Frisby (2004), DeBraganza and Hausenblas (2010), and others (e.g., Jefferson & Stake, 2009; Wood & Petrie, 2010) are consistent with the tenets of social comparison theory (Festinger, 1954), which argues that people tend to make social comparisons with those who are similar to themselves (e.g., similar skin color and similar attitudes, values, or personality). As Milke (1999) and others have argued, perhaps Black girls and young women are insulated from the cumulative impact of exposure to the dominant White ideals because of their dissimilarity and, thus, their disinclination to make destructive upward social comparisons. Moreover, despite the fact that Black youth report that they consume more hours of media in comparison to White youth (Roberts et al., 2005), it also appears to be the case that the beauty ideal presented in programs targeted at Black audiences and promoted in the Black community include a broader range of body sizes than those targeted at the general population (Schooler et al., 2004; Tirodkar & Jain, 2003). Although social comparison theory is clearly an important contributor to our understanding of media effects (see, e.g., Trampe et al., 2007), much more research is needed to clarify the role of the Black–White distinction, various ethnicities, and ethnic identity (Wood & Petrie, 2010) in moderating media effects (Levine & Smolak, 2010).

A Final Reflection

Despite nearly 35 years of concern about the relationship between mass media and eating disorders, there remains a strong need for both basic and applied research on the processes and mechanisms that constitute risk and protective factors in regard to the effects of the media on attitudes and behaviors related to body image and eating behavior in females (Dittmar, 2009; Harrison & Hefner, 2008; Levine & Harrison, 2004; 2009; Levine & Murnen, 2009). Developmental factors, ethnicity (including level of ethnic identity and acculturation), cross-cultural differences and similarities (Levine & Smolak, 2010), and the impact of new(er) media are all areas in need of substantial clarification. There is also a need for refinements and greater consensus in research methodology. Lack of agreement in the assessment of key variables is particularly troublesome; Grabe et al.’s (2008) meta-analysis reveals 14 different scales used by various studies to assess body dissatisfaction. We applaud initiatives such as those adopted by Cafri et al. (2005) to review only studies that used measures with demonstrated reliability and validity. Finally, there is a clear need for models (see, e.g., Figure 1) that provide a foundation for studies to determine whether the processes studied are definitely mediating and/or moderating variables in the contexts and pathways that constitute media effects.
NOTES

1. Unless otherwise noted, all research samples are from the United States of America, and all measures are self-reports.
2. Technically, this well-known study by Becker et al. (2002) is not an experiment or quasi-experiment, but rather a statement of correlation between the variables being assessed and the coming of television to Fiji, especially since other social and economic changes related to the institution of mass media may be contributing to the phenomena of interest.

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Influence of Mass Media on Body Image


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