

THE IMPACT OF MEDIA EXPOSURE ON MALES' BODY IMAGE

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Mass media are believed to be a pervasive force in shaping physical appearance ideals and have been shown to negatively impact females' body image. Little research has attended to the effects of media exposure on males' body image. The current experiment exposed 158 males to television advertisements containing either ideal male images or neutral images that were inserted between segments of a television program. Participants were blocked on dispositional body image and attitudes toward appearance variables to assess for moderating effects. Results indicated that participants exposed to ideal image advertisements became significantly more depressed and had higher levels of muscle dissatisfaction than those exposed to neutral ads. Inconsistent with past research, no dispositional effects were noted that would suggest the influence of schematicity on mood and body image changes.

Body image disturbance, often viewed as a continuum of satisfaction and dissatisfaction with one's physical appearance (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), has been linked to low self-esteem, depression, and social anxiety (Cash, 1990; Frederick & Morrison, 1996; Thompson, 1992). Body dissatisfaction has been recognized as a precursor to dieting and often precipitates disordered eating (Twamley & Davis, 1999). The vast majority of body image research has focused on females who generally report more disturbance (Rodin, Silberstein, & Striegel-Moore, 1985; Thompson, 1996; Thompson et al., 1999), but attention to males' body image has slowly been increasing (Pope, Phillips, & Olivardia, 2000). In an early study on male body image, 95% of college-age men expressed dissatisfaction with some part of their bodies and 70% experienced a discrepancy between their current

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and ideal body shapes (Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986). In the most recent national survey, Cash (1997) found that body dissatisfaction had increased for both genders from earlier reports (Berscheid, Walster, & Bohrnstedt 1973; Cash, Winstead, & Janda, 1986), nearly threefold (15% to 43%) in males. Cash (2002) has questioned the validity of concluding from magazine surveys that body dissatisfaction is on the rise, but it is possible that males are becoming increasingly aware of body image ideals. Increased efforts to more accurately assess and effectively address males' body image concerns are warranted.

From *Playgirl* and Chippendales, debuting in the 1970s, to muscle movies such as *Rambo* in the '80s, to the male cosmetic surgeries of the '90s, the emphasis on appearance that has long plagued women has been increasingly directed at men. *Playgirl* centerfolds have become increasingly dense and muscular (Leit, Pope, & Gray, 2000), and the emphasis on muscularity is communicated to even the youngest males with toy action figures becoming significantly more muscular and now exceeding world-class body builders (Pope, Olivardia, Gruber, & Borowiecki, 1999). Recently succumbing to what has been called an "Adonis complex of attractiveness" (Pope et al., 2000, p. xiii), men have increased their efforts to build muscle and stay lean. The ideal male body of the new millennium is increasingly unattainable (Pope et al., 1999), resulting in real-ideal discrepancies that lead to lower self-esteem and depression in men (Pope et al., 2000). As observed in so many studies of females, having a desired body size and degree of physical attractiveness other than one's own can lead to body image dissatisfaction, the use of weight-control strategies, and a heightened potential for eating pathology (Thompson & Tantleff, 1992; Jacobi & Cash, 1994).

While the feminine ideal has tapered, the average American woman's weight has increased (Garner, Olmsted, Bohr, & Garfinkel, 1982), leading to larger discrepancies between what is culturally desirable and what is physiologically evident. A parallel struggle has occurred for men for the physical attributes of attractiveness and muscularity. A comparison of the most popular magazines revealed that, although many more diet-related advertisements and articles were found in female-targeted magazines, there were significantly more exercise and weight-lifting advertisements in male magazines (Andersen & DiDomenico, 1992). Thus, the print media encourages women to control their weight through dieting while urging males to mold their bodies through exercise. Just as women are vulnerable to the *culture of thinness* that permeates Western society (Heinberg, 1996), males are subjected to a *culture of muscularity*.

Sociocultural theory of body image proposes that societal standards of beauty are inordinately stressed (Fallon, 1990) and contribute to the de-

velopment and maintenance of body image disturbance (Thompson et al., 1999). Recent research has addressed the role of social comparison as a prime factor in the development and maintenance of body image disturbance (Smolak, Levine, & Gralen, 1993; Striegel-Moore, McAvay, & Rodin, 1986; Thompson, Heinberg, & Tantleff, 1991). Females report appearance-related peer group comparisons to be the most influential on body image, whereas males place a greater emphasis on comparisons with celebrities (Heinberg & Thompson, 1992). Given that males also tend to find visual material more evocative than females do (Barthel, 1992), the media may play a larger role in males' body image concerns than previously thought.

One shortcoming of sociocultural theory is that it fails to explain why some people are more impacted by the media than others. To address this, researchers have borrowed from Markus's (1977) self-schema theory and have applied the concept of appearance schemas—organizing and guiding cognitive structures that process self-relevant information (Altabe & Thompson, 1996; Cash & Labarge, 1996; Labarge, Cash, & Brown, 1998; Markus, Hamill, & Sentis, 1987). Individuals' schematics for a dimension such as body image investment may be primed by exposure to ideals of attractiveness and, in turn, process and react more negatively to appearance stimuli than those who are aschematic on that dimension (Altabe & Thompson, 1996; Cash, 1994; Cash & Labarge, 1996; Lavin & Cash, 2001). Further, researchers propose that individuals internalize the body shape found most acceptable by others and evaluate themselves against this perceived ideal (Higgins, 1987; Stice, 1994).

Although sources that emphasize the importance of physical beauty are omnipresent (Thompson et al., 1999), the most influential force in forming, strengthening, and activating stereotypes has been the mass media (Andersen & DiDomenico, 1992; Lavine, Sweeney, & Wagner, 1999). Today's media do not distinguish between glorified fiction and reality (Freedman, 1986), thus society regards media images as realistic representations of beauty and as appropriate comparison targets for appearance (Fallon, 1990; Jasper, 1993). Television and magazines exacerbate this problem by presenting airbrushed, artificial images as real. Experimental evidence suggests that females who view idealized female images become less satisfied with their own appearance and exhibit more eating disorder symptoms (Cash, Cash, & Butters, 1983; Stice & Shaw, 1994; Then, 1992), and males subsequently judge the average woman to be less attractive and rate their current relationships as less favorable (Kenrick & Gutierrez, 1980). A meta-analysis of 25 studies indicated that, compared to control groups, females who viewed thin models experienced more negative effects on body image, and these effects were stronger for females' schematics for appearance (Groesz, Levine, &

Murnen, 2002). Rodin and colleagues (1985) have suggested that mass media may define where on the continuum of body image dissatisfaction/eating disorder pathology one falls. However, the proverbial "chicken or the egg?" question regarding media and body image remains since some research supports the notion that the media give people what they already want (Raphael & Lacey, 1992; Silverstein, Perdue, Peterson, & Kelly, 1986). Most likely, the relationship between mass media and body image is complex, reciprocal, and defined by many moderating variables (for review see Tiggeman, 2002; Thompson et al., 1999).

Despite the apparent impact media have on females' body image, little research has attended to the effects of media exposure on males' body image. Further, the influence of television viewing on body image has only recently been addressed (Gonzalez-Lavin & Smolak, 1995; Heinberg & Thompson, 1995; Stice & Shaw, 1994). To date, there are only three published studies that specifically investigated the impact of television advertisements on body image satisfaction, and only one of these included males. Contrary to their hypotheses, Myers and Biocca (1992) found that watching appearance-related programming and advertising decreased body size overestimations and depression levels in females. In contrast, Heinberg and Thompson (1995) found that women became more depressed, angry, and had higher degrees of body image disturbance following exposure to appearance and thinness-related television advertisements. Women with high levels of disturbance became more dissatisfied with their weight and overall appearance following exposure, suggesting that some individuals may be especially vulnerable to negative effects of appearance-related media. Lavine et al. (1999) found that, compared to men exposed to neutral advertisements, men exposed to advertisements that portrayed women as sex objects rated their own bodies as thinner. Viewing sexist ads also led to larger discrepancies between actual and ideal body size (with men preferring a larger body and chest) and overestimations of the ideal male size selected by their male peers. Thus, television advertisements may impact males' body image via messages that lead to inaccurate, stereotyped perceptions of the ideal and negative self-appraisals. Many of the sexist advertisements also depicted males as sex objects. Such portrayals of the muscular ideal male may shape the body images of men, much like thin models impact women (Fallon, 1990).

In sum, although little empirical evidence exists regarding media's direct impact on males' body image, research does suggest that the rate of body image dissatisfaction among males may be increasing (Garner, 1997; Serdula et al., 1993) and that appearance-related media messages are influential (Murphy, 1993; Pope et al., 2000). Further research is

needed to understand the extent to which media messages influence male body image and eating behavior. The present investigation was designed to assess the impact of television advertisements on male body image satisfaction and identify individual differences that may moderate the relationship between sociocultural pressures and body image disturbance in males. It was hypothesized that intense exposure to television advertisements containing male images that reflect the cultural ideal would lead to greater body image dissatisfaction and negative mood changes than exposure to nonappearance-related commercials. Further, it was expected that the impact of viewing attractive images would be moderated by negative appearance-related cognitions and sociocultural attitudes toward appearance, such that participants with high levels of negative appearance-related cognitions and acceptance of societal standards of attractiveness would experience more distress following exposure to appearance-related advertisements. It was expected that participants exposed to nonappearance-related television advertisements, regardless of their dispositional levels of disturbance or adherence to socially sanctioned standards of attraction, would experience no significant changes in mood or body image satisfaction.

METHOD

PARTICIPANTS

Although similar studies with females have reported effect sizes of .50 (Heinberg & Thompson, 1995; Lavine et al., 1999; Myers & Biocca, 1992), a more conservative estimate for this unstudied male population was used. With an estimated effect size of .40 and a suggested power of .80, Cohen (1988) recommends a sample size of 100. Since the current study compared the upper and lower thirds of the population based on levels of body image and internalization of sociocultural attitudes toward appearance, a larger sample of 158 male undergraduates at a large open enrollment university in the southeast was obtained. Of the participants, 98% were between 17 and 27 years, with a mean age of 21.3 ($SD = 4.01$); 66% of the sample were Caucasian, 14.0% were Hispanic, 10.2% were African American, and 5.1% were Asian. Participants' weights ($M = 172.5$ pounds, $SD = 29.1$) and heights ($M = 70.9$ inches, $SD = 2.7$) were used to calculate Quetelet's Index (Wt/Ht^2), $M = 24.1$, $SD = 3.5$. All participants received extra credit for volunteering their participation.

Each participant was randomly assigned to either the appearance advertisement (experimental) group or a nonappearance advertisement (control) group. No significant differences were found between the two video groups with regard to demographic information,

TABLE 1. Group Comparisons on Demographics and Video Comprehension/Attention Check

Variable	Appearance Group (<i>n</i> = 81)		Non-appearance Group (<i>n</i> = 77)		<i>t</i> -value	<i>p</i> -value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Age	20.88	2.29	21.85	5.25	1.53	.13
Weight (lb)	70.80	2.90	70.93	2.38	0.30	.76
Height (in)	169.28	29.40	176.08	28.64	1.47	.15
BMI	23.69	3.48	24.56	3.53	1.55	.12
TV viewing (hrs/day)	2.32	0.93	2.41	0.96	0.64	.52
Comprehension check %	9.34	0.50	9.42	0.56	0.81	.42

body mass index, or television viewing variables. Descriptive information regarding the homogeneity of the two groups is presented in Table 1.

MEASURES

Four subscales of the Multidimensional Body-Self Relations Questionnaire (MBSRQ; Brown, Cash, & Mikulka, 1990; Cash, Winstead, & Janda, 1985; Cash et al., 1986) were used to assess appearance satisfaction, importance of outward appearance, feelings of being physically fit, and overall investment in appearance and fitness. Separate analyses were done for each subscale. Internal consistencies (Cronbach's alpha) for the current male sample were .86 for MBSRQ-AE, .89 for MBSRQ-AO, .80 for MBSRQ-FE, and .91 for MBSRQ-FO.

The 21-item Sociocultural Attitudes Toward Appearance Questionnaire - Male Version (SATAQ-M; Heinberg, Thompson, & Stormer, 1995) was used to assess awareness and acceptance of cultural ideals of attractiveness. Cronbach's alpha was .85 for the Internalization scale and .84 for the Awareness scale.

The nine-item Physical Appearance Subscale of the Bulimia Cognitive Distortions Scale (BCDS-PA; Schulman, Kinder, Powers, & Prange, 1986) was used to measure irrational beliefs and cognitive distortions associated with physical appearance. Cronbach's alpha for the BCDS-PA was .89.

Visual analogue scales (VAS) were used to assess immediate changes in mood and body dissatisfaction after viewing the televised program and advertisements. Participants were asked to place a small vertical mark across a 10cm horizontal line anchored with the labels "no" dis-

tress on the far left and "extreme" distress on the far right to represent how they felt at that time. Individual responses were measured to the nearest millimeter, producing a numerical representation of the marking on a 100-point scale. Participants provided several ratings of mood and body image, including anxiety, depression, happiness, anger, confidence, weight dissatisfaction, and satisfaction with overall physical appearance. A second set of visual analogue scales was used to assess levels of dissatisfaction with particular body sites most important to males, including face, hair, biceps, chest, abdomen, and calf muscles. Past research has indicated significant relationships between VAS measures of depression, anger, and anxiety and their respective subscales on the Profile of Mood States (Heinberg & Thompson, 1995). Similarly, VAS measures for body dissatisfaction have been significantly correlated with the Body Dissatisfaction Subscale of the Eating Disorders Inventory (Garnier, Olmstead, & Polivy, 1983). Because they are highly sensitive to small state changes, VAS are useful in counteracting the effects of demand characteristics for participants who are more reluctant to report extreme levels of mood and body disturbance (Thompson, 1996). After the initial scoring, a second rater was used to measure a random sample (20%) of the total VAS questionnaires to ensure scoring accuracy. Interrater agreement was 91%.

VIDEOTAPE STIMULI

Two 30-minute video segments were created, the first containing appearance-loaded advertisements and the second containing nonappearance-related advertisements. The commercials were videotaped from standard and cable television channels during peak viewing hours. A series of four advertisements was shown during four separate commercial segments of the television program *Family Feud* (with original host Richard Dawson), chosen because of its neutral body image content and absence of references to sociocultural ideals. An initial sample of commercials featuring male actors was compiled from 40 hours of taped television and rated by a pilot sample of 30 male students according to the degree to which they reflected the male ideal of attractiveness (1 = unattractive to 7 = very attractive) as well as their overall appeal (1 = disliked very much to 7 = liked very much). The participants also rated the attractiveness and appeal of the television program to ensure its neutrality, controlling for threats to construct validity of putative causes and effects (Cook & Campbell, 1979), and thereby attributing the experimental effects to viewing male ideal commercials. The results of this pilot led to the selection of 16 commercials that each contained actors judged to be the most indicative of the male ideal (based on sample mean scores).

Seventy-one percent of the actors in each of these commercials were lean, muscular, young (in their 20s) males (50% Caucasian, 41% African American, 7% Hispanic) wearing athletic attire (sometimes without shirts) in deodorant, cologne, and athletic performance-enhancement commercials. The advertisements for the experimental tape were matched with 16 control commercials that had similar mean scores on appeal, yet rated as not reflecting the male ideal or promoting appearance-related products. Seventy-nine percent of the actors in each of the control commercials were mid- to older-adult men (30+ years; 91% Caucasian, 7% African American, 2% Hispanic), fully clothed in business or casual attire in business or home settings, advertising financial, telephone, or automobile companies. The selected advertisements were inserted in place of the original commercial segments to produce two distinct (experimental and control) 30-minute videotapes.

PROCEDURE

Participants were informed that they would be taking part in two separate studies (on two different days), the first of which investigated beliefs about appearance, and the second of which examined television viewing and attention. Participants provided basic demographic information and completed the visual analogue scales, followed by the body image measures (MBSRQ, SATAQ, BCDS). Upon completion of the Time 1 survey packet, each participant was scheduled to return approximately one week later to view the videotape and complete the last set of measures. This seven- to ten- day lag was used to minimize priming effects of Time 1 questionnaires. Upon return for the second session, participants were randomly assigned to either the appearance or nonappearance video condition and sent to the appropriate room in groups of three to eight per condition. Participants were told that they were participating in a short study about television viewing and retention to minimize hypothesis guessing, evaluation apprehension, and similar threats to construct validity (Cook & Campbell, 1979).

Prior to beginning the videotape, the experimenter read a scripted set of instructions asking all participants to watch the entire videotape and to refrain from any interaction during the program to avoid distracting (or influencing) other participants. Following the video presentation, participants were asked to complete the visual analogue scales and a brief manipulation check. The manipulation check contained multiple-choice questions about the program and advertisements to ensure comprehension and attention, and to assess for hypothesis guessing. Students were debriefed and awarded extra credit for their participation. With the exception of seven participants, all participants who

missed their Time 2 session were rescheduled and completed their participation within two days of their original appointment.

DESIGN AND ANALYSES

Independent variables included measures of body image (MBSRQ, BCDS-PA) and sociocultural attitudes toward appearance (SATAQ). Though these scales are positively correlated and measure similar constructs related to body image, none shared over 20% of common variance and were therefore analyzed independently. Scores on these measures were ranked and divided into three groups, creating distinct upper and lower levels of body image and internalization of sociocultural attitudes toward appearance. Stimulus material (appearance - nonappearance) and time of testing (pre - post) were also entered as independent variables.

The dependent measures of mood used in the final analyses (anxiety, depression, anger) were treated independently since none shared more than 35% of common variance. The seven individual areas of muscle dissatisfaction, however, had a high degree of overlap, averaging over 60% of shared common variance among the measures and were therefore collapsed into a single index of muscle dissatisfaction with an alpha of .89 (see Bordens & Abbott, 2002). Items regarding weight satisfaction and weight concerns had poor internal consistency and were therefore omitted from the final analyses to avoid spurious effects. All dependent measures of mood and body areas dissatisfaction were derived from the VAS. Hypothesis testing for the current study used a 2 (time of testing) \times 2 (advertisement type) \times 2 (disposition level) factorial design. BMI initially was entered as a covariate to control for moderating effects, but covarying BMI (which is not as good at measuring adiposity in men) did not significantly affect the analyses. Therefore, final analyses used a repeated measures MANOVA to test for group differences across dependent mood dimensions.

RESULTS

Information obtained during Time 1 indicated a high degree of exposure to television advertisements. All participants reported having at least one television in their homes ($M = 3.1$, $SD = 1.5$) and watched an average of 2.4 hours per day ($SD = 0.94$), most frequently (97%) on commercial networks. Results of the manipulation check revealed that all participants were able to accurately answer over 90% of the posttest questions about video content ($M = 9.3$, $SD = 0.53$), indicating a high degree of stimulus attention and comprehension. Only four participants (two experi-

mental, two control) correctly identified the general purpose of the study (to see how commercials affect how we feel about ourselves), but were not specific in stating the particular effects in question. Their data were retained in the study.

Results of the repeated measures MANOVA indicated a significant time by condition interaction, $F(4, 144) = 4.05, p < .004$. Significant univariates emerged for the muscle dissatisfaction VAS, $F(1, 147) = 9.49, p < .002$, and depression, $F(1, 147) = 4.66, p < .006$. Fisher protected t-tests revealed that males exposed to appearance-related advertisements had significantly higher reports of muscle dissatisfaction from Time 1 (56.19) to Time 2 (62.91) than those exposed to neutral control advertisements (56.61 - 58.32), $t(147) = -1.92, p < .051$. Similarly, males who viewed the body image ideal advertisements became significantly more depressed (28.37 - 31.12) following exposure, whereas males exposed to the nonappearance commercials significantly decreased in levels of depression (27.34 - 23.85) after stimulus presentation, $t(147) = -2.66, p < .009$ (see Table 2). Although no significant univariate interactions were found for VAS anger or anxiety, each had a main effect for time, $F(1, 147) = 15.03, p < .001$ and $F(1, 147) = 8.83, p < .003$, respectively. Levels of reported anger decreased in both the experimental (26.88 - 22.33) and control groups (26.89 - 19.05) over time. Similarly, both groups exhibited lower levels of anxiety following exposure to appearance (35.85 - 29.95) or nonappearance advertisements (34.56 - 29.46).

Time \times Condition \times Dispositional Level of Disturbance (High/Low) MANOVAs revealed no significant multivariate or univariate interactions for the BCDS-PA, SATAQ, or the MBSRQ subscales. There was a main effect for dispositional level on the VAS dimensions using both the SATAQ, $F(8, 276) = 1.96, p < .05$, and the BDCS-PA, $F(8, 282) = 3.76, p < .001$.

Across conditions and time of testing, high scorers on the Body Image and Sociocultural Attitudes toward appearance questionnaires had significantly higher levels of VAS depression, anger, and anxiety, and were less satisfied with their physiques than low scorers.

DISCUSSION

The findings suggest that exposure to media images of the ideal male body, defined as lean and muscular, can have deleterious effects on mood and body satisfaction in men. The results indicate that exposure to ideal images of attractiveness via television advertisements can significantly increase one's muscle dissatisfaction, whereas exposure to nonappearance advertisements shows no effects on body dissatisfaction. Viewing ideal male images also was associated with a significant increase in depression, whereas exposure to neutral advertising had the

TABLE 2. Mean Levels of Muscle Dissatisfaction and Negative Mood Dimensions for Appearance and Non-Appearance Advertisement Groups over Time

Variable	Time 1				Time 2			
	Non Appearance		Appearance		Non Appearance		Appearance	
	M	SD	M	SD	M	SD	M	SD
Muscle Dissatisfaction	56.6	14.6	56.2	16.5	58.3	14.8	62.9 ^a	14.4
Depression	27.3	19.1	28.4	19.9	23.9 ^b	16.7	31.1 ^b	16.7
Anger	26.9	20.9	26.9	21.0	19.1 ^c	19.7	22.3 ^c	20.3
Anxiety	34.6	21.2	35.9	21.5	29.5 ^c	20.9	30.0 ^c	21.3

^aSignificant time \times condition interaction, $p < .05$. ^bSignificant time \times condition interaction, $p < .01$. ^cSignificant main effects for time, $p < .005$.

opposite effect, with significant decreases in depression reported. Levels of anger and anxiety decreased for both conditions, suggesting that merely participating in a study may involve a degree of novelty that could initially exaggerate these emotions, which later decrease as a function of subsiding evaluation apprehension rather than an experimental effect. Further, it is important to note that the clinical significance of findings based on VAS measures is unclear, and the extent to which VAS scores can discriminate between at-risk and normal levels of psychological disturbance needs further study.

Given the corresponding changes in mood and body disturbance following exposure to ideal images, it can be concluded that such media effects are not restricted to self-image and may "...reflect a more global shift in negative self-evaluation" (Heinberg & Thompson, 1995, p. 335). It is possible that the appearance videotape triggered schema-driven processes that, based on self-to-ideal image comparisons, resulted in negative self-evaluations manifested in body dissatisfaction and dysphoria. However, because individuals both high and low in dispositional measures of disturbance experienced comparable effects of ideal image exposure, the current findings are inconsistent with studies of female samples that support the notion of varying degrees of vulnerability to negative contextual events (Cusumano & Thompson, 1997; Heinberg & Thompson, 1995; Stice, Schupak-Neuberg, Shaw, & Stein, 1994). The absence of an additive effect in which individuals high on disturbance are more adversely affected by ideal advertisements suggests that males may not internalize and process sociocultural pressures of appearance through the same schema-driven processes as females. Instead, the current study suggests that males, regardless of schematicity,

are reactive to appearance-related cues and may interpret these messages at face value without filtering them through a pre-existing internal set. If accurate, this finding may limit the applicability of current cognitive models, and exploration of theoretical implications is needed.

An alternative explanation for the inconsistency between our findings and those with female samples may relate to representation of pretest scores. Although participants were divided into three disposition groups based on pretest scores, it is possible that the range of scores was not indicative of truly high or low levels of disturbance (BCDS, MBSRQ) or social conformity (SATAQ) in males. Median scores were comparable to those found by Heinberg and Thompson (1995), but males' scores on these female-normed instruments might represent different levels of disturbance, making interpretation of dispositional effects difficult. These instruments may not be sensitive to males' body image concerns, leading to restriction of range and failure to detect moderating effects of dispositional levels. Similarly, the nonsignificant differences between the "high" and "low" disposition groups in the control condition could have resulted from the neutral stimulus, as hypothesized, or could have reflected range restriction and measurement confounds. Clearly, future research should ensure fully representative ranges of scores on male-normed measures have sufficient sample sizes for group comparisons.

The current study incorporated several methodological changes from previous experiments. The most fundamental difference was the use of an all male sample. The application of past methodology to male participants has introduced a host of gender-related issues and questions that have previously been ignored or assumed consistent. Several procedural alterations also are worthy of note. First, past studies have administered pre- and post-test measures in one sitting, creating the possibility of pretest sensitization and priming effects of the measures. To control for these threats in the current study, Time 1 and Time 2 data were collected approximately one week apart and were presented as separate studies. Although Heinberg and Thompson (1995) describe their schema-activating contextual event as viewing an appearance video, it is possible that appearance schemas were activated by pretest measures, making it impossible to isolate the effects of the video condition from pretest effects. A second procedural change in the current experiment involved the presentation of appearance-related advertisements within the context of a neutral game show program, creating a more realistic examination of television viewing. Past studies have either manipulated both commercials and program content for attractiveness (Myers & Biocca, 1992) or presented a continuous series of ideal advertisements (Heinberg & Thompson, 1995; Lavine et al., 1999). Although these more

concentrated exposures resulted in negative effects, they may have exaggerated the effects of typical television viewing.

Despite the limitations described, the current study demonstrated adverse effects of appearance-related media exposure on males' body image. Given that the average person is exposed to nearly 25 appearance-related commercials each day, over 150% more than that presented in the current experiment, such negative effects remain a cause for concern. Though we can speculate about the cumulative effect of daily exposure to appearance ideals, future research should aim to identify specific long-term effects of media exposure. It is important to extend our knowledge of males' body image and further explore the applicability of findings based on female samples. Understanding more about males' cognitive schemas of body image, for example, may help explain how some individuals are able to disregard media messages of attractiveness and effectively confront the everyday pressures of meeting an unattainable ideal.

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