Sex Roles
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ORIGINAL ARTICLE

Gender Discrepancies in Perceptions of the Bodies of Female Fashion Models

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Abstract

For over 30 years, researchers and journalists have made the claim that men do not prefer the level of thinness typically embodied by female fashion models, along with the secondary claim that women overestimate the extent to which men find these ultra-thin bodies attractive. The current studies examined men's and women's perceptions of the bodies of fashion models shown in media images, as well as how each gender believed the other would perceive the models' bodies. In Study 1, 548 U.S. college students rated the body size and attractiveness of 13 images of models from women's fashion magazines. Respondents also indicated how they thought the other gender would rate the models on these dimensions. In Study 2, 707 men and women recruited from Amazon's Mechanical Turk completed the same rating task. Overall, both men and women overestimated how ideal the other gender would find the models' bodies (both in terms of thinness and attractiveness). This misperception was strongest when women estimated how men would react to the models' bodies. Results were consistent with previous studies suggesting that men do not find the ultra-thin body ideal for women as attractive as women believe men do. These gender-based misconceptions may contribute to the negative effects of viewing ultra-thin media images on women's body image.

Keywords Body weight · Media exposure · Body image · Imagery · Human sex differences · Thin ideal · Media images · Gender differences

Researchers have identified a number of factors contributing to high rates of body dissatisfaction among women in Western cultures, but idealized media images of women remain a primary culprit (Levine and Murnen 2009). Women represented in media are generally substantially thinner than the average woman and sometimes dangerously thin (Katzmarzyk and Davis 2001; Roberts and Muta 2017; Sypeck et al. 2006; Wiseman et al. 1992). These images of women also tend to be heavily retouched in a way that leaves them far removed from what real bodies look like (Paraskeva et al. 2017). Women's fashion and beauty magazines, in particular, are populated with images that rarely feature an exception to the thin body ideal (de Freitas et al. 2018; Wasylkiw et al. 2009). Women who compare their bodies to those of the women in these images are often left feeling as though they are falling short of cultural ideals around body size and shape (Cattarin et al. 2000; Engeln-Maddox 2005). Indeed, meta-analyses suggest that even brief exposure to media images representing a thin-ideal result in lower body satisfaction among women (Grabe et al. 2008; Groesz et al. 2002; Want 2009), a key risk factor for disordered eating (Bergstrom and Neighbors 2006; Stice 1994; Thompson and Stice 2001).

Numerous cultural forces encourage women to emulate or internalize the thin body ideal represented in media images (Stice and Shaw 1994; Thompson and Stice 2001). These pressures include advertisements that pair such ideals with other desirable outcomes like wealth, status, and romance (Dittmar 2007; Greenberg et al. 2003), the influence of a massive weight loss industry (Ethan et al. 2016; Marketdata Enterprises 2009), widespread anti-fat bias and weight-based discrimination (Puhl et al. 2008; Seacat et al. 2016), and normative influences from peers (Clark and Tiggemann 2006; Dohnt and Tiggemann 2006; Salk and Engeln-Maddox 2012).

Media images can also influence women's drive for thinness through the process of reflected appraisals. In other words, even women who reject the body standard promoted

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by media images may feel held to this standard if they believe others in their social group endorse it (Milkie 1999). Particularly for women who are interested in men as romantic or sexual partners, the belief that the media-promoted thin body ideal is most attractive to men can make media images featuring this ideal more impactful. Many young women believe they would have significantly more romantic success with men if their body looked more like the cultural ideal (Engeln-Maddox 2006) and experiments have demonstrated that telling women men prefer bodies larger than those of the typical fashion model can increase women's weight satisfaction (Meltzer and McNulty 2015). In sum, beliefs about *others'* perceptions of thin-ideal media images (particularly when these others are viewed as potential romantic partners) can be central to understanding the impact of these images. The current study examined the extent to which U.S. men and women accurately gauged each other's reactions to thin-ideal images of models taken from fashion magazines.

For over 30 years, researchers have argued that the body ideal internalized by many women is actually thinner than men's preferences for women's body size. These claims are typically based on two articles published in the 1980s (Fallon and Rozin 1985; Rozin and Fallon 1988). In these two articles, Fallon and Rozin also suggested that women are not aware of this gender gap in perceptions of the ideal female body. In other words, Fallon and Rozin argued that men do not want women to be as thin as women think men want them to be. These two articles have been cited over 1500 times and their conclusions have been circulated throughout popular culture. For example, a 2014 article in *Salon* magazine asked, "Why don't women know what men find attractive?," and it used these two studies as a basis for their assumption about the gap between the type of body men find attractive in women and women's beliefs about what men find attractive. Of course, it is fair to question whether or why women should concern themselves with what type of body men find attractive. However, given the importance of perceived physical attractiveness in driving romantic encounters between men and women (Eastwick et al. 2011; Hitsch et al. 2010), it is hardly surprising that women who are romantically interested in men would speculate about what men find physically attractive.

More recent updates using line drawings or silhouettes of women's bodies as stimuli have found a similar pattern to that identified by Fallon and Rozin's work (Fallon and Rozin 1985; Rozin and Fallon 1988). Women in these studies believed men preferred a thinner female figure than the men in the studies actually indicated as their preference (Cohn and Adler 1992; Grossbard et al. 2011; Lamb et al. 1993). However, a study using a program that allowed participants to create 3D versions of the ideal (virtual) female or male body and another that used images of women from a variety of BMI categories did not find that women preferred a body shape smaller than what men preferred (Crossley et al. 2012; Tovee and Cornelissen 2001). Thus, the type of visual stimuli used in these studies appears to have a meaningful impact on the pattern of results found, with larger gender gaps found in studies using line drawings or silhouettes rather than more realistic stimuli.

Fallon and Rozin's (Fallon and Rozin 1985; Rozin and Fallon 1988) initial findings (along with some of the replications we cited above) are often interpreted to mean that men do not prefer the ultra-thin body that dominates the pages of women's magazines or fashion runways. However, the drawings used as stimuli in these prior studies bear little resemblance to the bodies of women encountered in everyday life or the bodies of women regularly seen in media images. When presented with simple line drawings/silhouettes, men may tend to prefer a heavier woman's body than women believe men prefer, but it is not clear that this disconnect extends to the heavily perfected images of women's bodies we see in media images. The current studies were designed both as a conceptual replication of work on this topic and as a direct extension of initial findings to idealized media images featuring women's bodies.

Given that women regularly look to media images to inform their notions of cultural beauty ideals (Grabe et al. 2008; Owen and Laurel-Seller 2000; Meltzer and McNulty 2015), we employed actual media images of women's bodies instead of silhouette scales. Both men and women regularly encounter such images in a variety of settings, and the images undoubtedly affect perceptions regarding norms for women's body sizes and shapes (Bair et al. 2014; Owen and Spencer 2013). Further, instead of asking participants to select one image most consistent with their body ideal (as in studies using silhouette scales or 3D programs), we collected ratings of the size and attractiveness of the bodies featured in recent women's fashion magazines. In addition to participants providing their own ratings of the images, we asked them to indicate how they believed the other gender would rate the images. The sample for Study 1 comprised undergraduate students in the United States.; Study 2's sample included a broader range of U.S. adults obtained through Amazon's Mturk (Buhrmester et al. 2011). Both studies were approved by Northwestern University's Institutional Review Board prior to data collection.

Because the stimuli used in these studies differed substantially from single-item silhouette scales used in previous research, we did not make specific a priori hypotheses about our expected pattern of results. Instead, we approached the data by addressing three research questions: (a) Do men and women differ in their perceptions of the body size or attractiveness of thin-ideal media images of women? (RQ1), (b) Do men and women accurately assess the other gender's perceptions of the body size and attractiveness of media images of women? (RQ2), and (c) How do men's and women's own views of

such images differ from what they believe the other gender's views of these images are (RQ3).

Study 1

Method

Participants

We conducted an a priori power analysis using G*Power (Faul et al. 2007) for between-subjects tests (i.e., tests comparing men's ratings to women's ratings) because between-subjects tests require greater sample sizes than within-subjects tests to obtain similar levels of statistical power. With a power level of .80, an alpha of .05, and a small effect size of $d = .25$ (i.e., a group difference of approximately one-quarter of a standard deviation), the recommended sample size was 506 participants. Thus, we set 506 as our minimum recruiting goal, but allowed the survey to remain open past when that goal was reached in order to account for participants who might fail the attention check included in the survey.

We invited undergraduate men and women in the United States to participate in an online study of "impressions of media images." Fully 306 women and 310 men completed the survey. We distributed the invitation through email lists, social media postings, and snowball sampling. Thirty-five states and the District of Columbia were represented in the sample. Participants could enter a raffle for a 1 in 10 chance of winning a $10 Amazon gift card as thanks for their participation. In order to make certain participants were college students, they were required to enter their .edu email address (which was stored separately from their responses to the survey).

We embedded two attention checks in the survey. The first asked participants to select a particular response (e.g., "extremely unattractive") for a rating question. The second asked participants to re-state a set of instructions they had just read. Forty-six respondents (7%) were excluded for failing the first attention check and an additional 22 (4%) for failing the second check. Ninety-eight percent of the remaining 548 participants (264 women, 48%; 274 men, 50%) were between the ages of 18 and 24 ($M = 20.16$, $SD = 2.31$). Men's and women's ages did not significantly differ, $t(546) = -.26$, $p = .79$. Sixty-one percent ($n = 334$) identified as White or Caucasian, 18% ($n = 98$) as Asian, 10% ($n = 57$) Latino/a, 8% ($n = 41$) as multiracial, 2% ($n = 12$) as Black or African American, and less than 1% ($n = 1$) as "other." Race/ethnicity did not significantly vary by gender, $\chi^2(5) = 9.44$, $p = .09$. A majority of participants (477, 87%) identified as heterosexual, 4% ($n = 22$) as gay or lesbian, and 4% ($n = 23$) as bisexual; 4% ($n = 20$) chose "other" or indicated they preferred not to report their sexual orientation. The proportion of men and women who identified as a sexual minority vs. heterosexual did not significantly differ, $\chi^2(1) = .64$, $p = .43$.

Materials and Procedures

Thin-Ideal Media Images

We collected images of models from recent issues of popular women's fashion magazines. Images were only included if at least three-quarters of the model's body shape was clearly visible (either because skin was showing or because the clothing was form fitting). A team of nine undergraduate research assistants (all women) selected 13 of these images based on their being consistent with and representative of the types of models typically seen in women's magazines. In one content analysis of fashion print campaigns, Tai (2016) found that the majority of models were White and less than a quarter of models featured in ad campaigns were Black, Asian, or Latina. For the images we selected that met the prior criterion, 12 of the 13 models were White and one model was Black. (These images are available from the corresponding author.) Faces were blocked out of each image so that ratings were based on the models' bodies alone. The order of images was randomized throughout the survey.

Image Ratings

After they consented to participate and completed basic demographic questions, we presented participants with the following instructions: "You will now be asked to rate a series of images taken from magazines. Please be honest in your ratings. We want to know what you really think, not what other people want you to think." Participants rated each model's size on a 7-point scale with the anchors 1 (*way too thin*), 4 (*just right*), and 7 (*way too fat*). The thinness scale was re-coded from −3 (*way too thin*) to 3 (*way too fat*). Thus, a negative mean would indicate a rating on the too thin side, a positive mean would indicate a rating on the too fat side, and a rating close to 0 (*just right)* would be ideal. Participants also rated how attractive the model's body was on a 7-point scale ranging from 1 (*extremely unattractive*) to 7 (*extremely attractive*). The midpoint (4) for this scale was labeled "average." The attractiveness scale was also re-coded from −3 (*extremely unattractive*) to 3 (*extremely attractive*) with a midpoint of 0 indicating *average*. Thus, a midpoint rating would be considered ideal on the size scale, but a rating of three would be considered ideal on the attractiveness scale.

After completing size and attractiveness ratings for all 13 images, participants read the following instructions. (These instructions varied by participants' gender, so that if a participant identified as a woman, the word "men" was used; if the participant identified as a man, the word "women" was used.

In other words, participants considered the perspective of a gender different from their own.)

> For the next group of images, we're going to ask you to rate how you think men [women] would perceive these images. In other words, don't rate the images according to what you think. Instead tell us how you think men [women] would rate the images.

The second attention check described here required participants to re-state these instructions on a new page. Participants then used the same attractiveness and size scales to rate how they guessed the other gender would rate each image. In sum, each participant rated the set of model images twice on two factors (body size and attractiveness), yielding two composite ratings for each factor: (a) their own rating and (b) their guess of what they imagined the rating of the other gender to be.

Results

Size ratings across the 13 models showed a high degree of internal consistency both for men ($\alpha = .87$) and women ($\alpha = .88$). Similarly, attractiveness ratings were highly internally consistent for both men ($\alpha = .90$) and women ($\alpha = .88$). Thus, we created a composite score for size and a composite score for attractiveness by averaging the ratings for all 13 images.

Size and Attractiveness

As a reminder, the size scale ranged from −3 (*way too thin*) to 3 (*way too fat*), with the midpoint labeled as "just right." Table 1 reports complete descriptive statistics for all cells in our study. Overall, participants perceived the models in these images as thin. Mean size ratings for each of the 13 individual models were all below the midpoint of the scale, ranging from −2.02 to −.60. The range of size ratings was heavily restricted (means for all models were all in the "too thin" range and the highest size composite rating for any individual participant was .23 on the 7-point scale). The attractiveness scale ranged from −3 (*extremely unattractive*) to 3 (*extremely attractive*), with the midpoint labeled as "average." Overall, participants tended to rate the models at slightly above the midpoint of the scale, with mean ratings for individual models ranging from −.45 to 1.53. Ratings of the attractiveness of models' bodies and their body size were positively correlated for both men, $r(281) = .41$, $p < .001$, and women, $r(267) = .40$, $p < .001$. In other words, as models moved away from the "too thin" side of the rating scale and closer to the "just right" point of the scale, they were rated as more attractive. Both men's, $t(280) = -35.97$, $p < .001$, $d = 2.15$, and women's, $t(266) = -33.54$,

Table 1 Descriptive statistics for ratings of models body size and attractiveness, studies 1 and 2

Ratings	*M* [95% CI] SD	*M* [95% CI] SD	*M* [95% CI] SD	*M* [95% CI] SD
(a) Study 1: College Students				
	Composite Rating $n = 537$	Women rating models $n = 262$	Men rating models $n = 275$	Women guessing men's ratings; $n = 262$	Men guessing women's ratings; $n = 275$
Body Size	−1.11 [−1.15, −1.06] .53	−1.13 [−1.20, −1.12] .55	−1.09 [−1.15, −1.03] .51	−.44 [−.50, −.38] .50	−.71 [−.80, −.62] .75
Attractiveness	.62 [.56, .69] .79	.58 [.49, .67] .77	.67 [.57, .76] .80	1.41 [1.32, 1.50] .72	1.12 [1.01, 1.23] .93
(b) Study 2: MTurk Participants					
	Composite Rating $n = 707$	Women rating models $n = 351$	Men rating models $n = 356$	Women guessing men's ratings; $n = 351$	Men guessing women's ratings; $n = 356$
Body Size	−.97 [−1.01, −.92] .58	−1.04 [−1.10, −.98] .57	−.89, [−.95, −.83] .58	−.45 [−.50, −.40] .48	−.68 [−.76, −.59] .82
Attractiveness	.63 [.56, .70] .96	.42 [.32, .53] .99	.84 [.74, .93] .88	1.40 [1.31, 1.48] .79	.82 [.72, .92] .98

The composite ratings collapse across participants' gender. These same means are reported in Table 2 for Study 1 and Table 3 for Study 2 where they include the comparisons relevant to each research question

Table 2 Mean comparisons relevant to each research question, study 1

Rating of Models:	*M*	*M*
(a) Research Question 1		
	Women rating models	Men rating models
Body Size	−1.13	−1.09
Attractiveness	.58	.67
(b) Research Question 2		
	Women rating models	Men guessing women's ratings
Body Size	-1.13_a	$-.71_a$
Attractiveness	$.58_b$	1.12_b
	Men rating models	Women guessing men's ratings
Body Size	-1.09_c	$-.44_c$
Attractiveness	$.67_d$	1.41_d
(c) Research Question 3		
	Women rating models	Women guessing men's ratings
Body Size	-1.13_a	$-.44_a$
Attractiveness	$.58_b$	1.41_b
	Men rating models	Men guessing women's ratings
Body Size	-1.09_c	$-.71_c$
Attractiveness	$.67_d$	1.12_d

Different subscripts across each row indicate a significant difference ($p < .05$). The confidence interval and standard deviation for each mean can be found in Table 1

$p < .001$, $d = 2.05$, ratings of thinness were significantly below the midpoint of the scale.

Research Question 1

First, we conducted analyses to determine whether men and women differed in their perceptions of the attractiveness and size of the bodies shown in the media images (see Table 2a). Based on composite ratings, men and women did not significantly differ in terms of their perceptions of the models' size, $t(546) = .79$, $p = .43$, $d = 0.07$. Likewise, there was not a significant gender difference in ratings of the models' bodies' attractiveness, $t(546) = 1.21$, $p = .23$, $d = 0.10$. In other words, college men and women rated the models as similarly thin and attractive.

Research Question 2

A series of independent samples *t*-tests was conducted to compare how each gender actually rated the models to how the other gender expected them to rate the models (see Table 2b). For example, these analyses tested whether men's guesses regarding how women would rate the models were consistent with how women actually rated the models. For size, there was a moderate, significant difference between women's actual ratings of the models and how men guessed women would rate the models, $t(540) = 7.28$, $p < .001$, $d = 0.63$. There was also a moderate, significant difference between women's actual ratings of the models' attractiveness and men's guesses of women's ratings, $t(540) = 7.46$, $p < .001$, $d = 0.64$. Men guessed that women would be less likely to find the models' bodies too thin and more likely to find the bodies attractive than women actually did. In other words, men overestimated the extent to which women would find the models' bodies ideal. Similarly, women also overestimated how thin men would find the models' bodies. Women guessed men would be less likely to rate the models' bodies as too thin, $t(541) = -14.95$, $p < .001$, $d = 1.28$, and more likely to find the bodies attractive than men actually did, $t(541) = -11.49$, $p < .001$, $d = 0.99$.

Research Question 3

Paired samples *t*-tests compared how each gender actually rated the models to how they guessed the other gender would rate the models. In other words, we examined how each gender believed their own perceptions of these images might differ from the other gender's perceptions (see Table 2c). For body size, there was a significant difference between women's ratings of the models' bodies and how women guessed men would rate the models' bodies, $t(261) = -16.88$, $p < .001$, $d = 1.31$. Women guessed that men would perceive the models as significantly heavier than they (the women) did. In other words, women expected men to view the models' bodies as

closer to the "just right" size, whereas women actually found the models closer to the "too thin" scale anchor, on average. Similarly, there was a significant difference in attractiveness ratings when comparing how women rated the models' bodies and how women guessed men would rate the models' bodies, $t(261) = -16.32$, $p < .001$, $d = 1.11$. Women believed men would find the models' bodies more attractive than they (the women) did. Together, this pair of results suggests that women think men like how the bodies of female fashion models look more than women do.

A similar pattern emerged in men's ratings. Men guessed women would rate the models' bodies as heavier (in this case, closer to the "just right" portion of the scale) than they (the men) rated them, $t(274) = -7.55$, $p < .001$, $d = 0.58$. Additionally, men guessed women would rate the models' bodies as more attractive than they (the men) did, $t(274) = -7.46$, $p < .001$, $d = 0.52$. In sum, consistent with the findings for women, men believed women would rate the models' bodies as closer to the ideal size and more attractive than they themselves rated the models.

Exploratory Analyses

The use of images from fashion magazines resulted in stimuli that differed on variables beyond body size. We conducted exploratory analyses examining two of these variables: models' breast size and sexualization. Although some research suggests that the impact of breast size on attractiveness ratings does not vary by the gender of the rater (Furnham and Swami 2007), others have documented gender differences in perceptions of the attractiveness of varying breast sizes (Tantleff-Dunn 2002). To examine whether models' breast size may have differentially influenced men's and women's ratings of the attractiveness of the models' bodies, two independent coders (both undergraduate women) examined each image and coded the model's breast size. We used the categories employed by Beasley and Collins Standley (2002) in an analysis of the body types of female video game characters. Breast size was rated flat, average, or voluptuous. The raters demonstrated adequate inter-rater reliability ($\kappa = .82$). The one disagreement was resolved by a third coder. Only one model was rated as having voluptuous breasts, two were rated as average, and the rest were rated as flat.

Men's and women's ratings of the average attractiveness of the flat-breasted models did not significantly differ ($p = .58$). Likewise, ratings of the attractiveness of the average-breasted models did not differ by gender ($p = .18$). However, men rated the one model with voluptuous breasts as more attractive ($M = 5.37$, $SD = 1.27$) than women did ($M = 4.91$, $SD = 1.31$), $t(545) = 4.14$, $p < .001$, $d = 0.35$. Similarly, men's and women's ratings of the thinness of flat-breasted models did not differ significantly ($p = .60$) nor did ratings of the thinness of average-breasted models ($p = .49$). There was a significant gender difference in thinness ratings for the one voluptuous model ($M_{men} = -.65$, $SD = .79$; $M_{women} = -.80$, $SD = .87$), $t(546) = 2.06.$, $p = .04$, $d = 0.18$. Men rated this model closer to "just right" on the body size scale, although the effect was small. Taken together, these results suggest that men's and women's ratings of the thinness and attractiveness of these models were not substantially influenced by the models' breast size in this set of images.

In a second set of exploratory analyses, we examined whether the sexualization of the models in the images might differentially impact men's and women's perceptions of the attractiveness of the models. Ratings of the sexualization of images of women often rely on factors such as an emphasis on the face versus the body and whether an image shows only part of a woman's body (Goodin et al. 2011). Those types of classification were not possible for the images used in the current study because all faces were blocked out and only full body shots were included. Instead, two independent raters coded each image in terms of the extent to which the image emphasized sexualized body parts (the buttocks and breasts). Images were coded into three categories: no emphasis on sexualized body parts (5 images), some emphasis on sexualized body parts (3 images), and extreme emphasis on sexualized body parts (5 images). Coders reached adequate inter-rater reliability ($\kappa = .88$); the one disagreement was resolved by a third coder.

Men's and women's ratings of the average attractiveness of the models in images coded as having no emphasis on sexualized body parts did not significantly differ ($p = .20$). Likewise, ratings of the attractiveness of the models in the images coded as having some emphasis on sexualized body parts did not differ by gender ($p = .70$). However, men ($M = 5.08$, $SD = .91$) rated the models in the images coded as having extreme emphasis on sexualized body parts as more attractive than women did ($M = 4.75$, $SD = .90$), $t(546) = 4.16$, $p < .001$, $d = 0.36$. Finally, there was no evidence of an association between the breast size of the models and the sexualization of the models, $\chi^2(4) = 7.48$, $p = .11$. Given the overall pattern of these exploratory analyses, we retained the same set of 13 images for Study 2.

Discussion

College men and women did not differ meaningfully in their ratings of the size and attractiveness of a set of images from women's magazines featuring thin-ideal models. Despite the range of size ratings being heavily restricted, ratings of the models' bodies' attractiveness and body size ratings were moderately correlated for both men and women. In other words, as the models moved toward the "too thin" side of the rating scale, both men and women rated them as less attractive.

Despite men and women rating the models' bodies similarly in terms of size, both men and women guessed the other gender would find the models' body size closer to ideal than they themselves did. Similarly, both men and women also guessed the other gender would find the models' bodies more attractive than they themselves did. In a related finding, both men and women significantly misperceived the other gender's reactions to these idealized media images of women. Taken together, results from Study 1 suggest parallel misconceptions: Both men and women believed that the other gender finds the body of a typical female fashion model more ideal/attractive than actual ratings indicated. Although effect sizes were moderate-to-large for these gaps in perceptions, they were particularly large (around a standard deviation or more) when it came to the gap between how women rated the images and how women believed men would rate the images. To put it a different way, women's guesses about how men respond to these types of images were more inaccurate than men's guesses about women's responses to these types of images.

Although Study 1 offered an initial examination of men's and women's perceptions of the thin-ideal, as well as their beliefs surrounding the other gender's perceptions of the thin-ideal, participants were all U.S. college students within a limited age range. We conducted Study 2 to examine men's and women's perceptions of thin-ideal media images of women in a more diverse sample with a broader age range.

Study 2

In Study 2, we used identical methodology to Study 1 to test whether similar gaps/misperceptions would be found in a broader sample not limited to college students. The same online survey was administered via Amazon's Mechanical Turk to U.S. adults over the age of 18 (see Buhrmester et al. 2011 for details regarding this method of participant recruitment).

Method

Participants and Procedure

Fully 385 men and 386 women completed the online survey described in Study 1. U.S. residents aged 18 and older were eligible. Forty-nine states and the District of Columbia were represented in the sample. Participants were paid $.50 for completion of the study described as focusing on "impressions of media images."

We included the same attention checks from Study 1 in the survey. Forty-one people (5%) were excluded for failing the first attention check and an additional 23 people (3%) were excluded for failing the second attention check. Of the remaining 707 participants, ages ranged from 18 to 86 ($M = 35.96$, $SD = 12.32$). Age did not significantly differ by gender, $t(704) = -1.40$, $p = .16$. Seventy-eight percent ($n = 548$) identified as White or Caucasian; 8% ($n = 56$) Black or African American; 4% ($n = 30$) Latino/a; 5% ($n = 34$) Asian; less than 1% ($n = 5$) American Indian; 4% ($n = 29$) Multiracial; and less than 1% ($n = 4$) as "other." Race/ethnicity varied by gender, $\chi^2(6) = 16.82$, $p = .01$. Slightly more women than men identified as Black or African American (10% vs. 6%; $n = 36$ vs. $n = 20$). A majority of participants (620, 88%) identified as heterosexual, 4% ($n = 30$) as gay/lesbian, and 6% ($n = 41$) as bisexual. Two percent ($n = 15$) either chose "other" or indicated they preferred not to indicate their sexual orientation. In the present sample, women were more likely to identify as sexual minorities than men (17% vs. 6.8%), $\chi^2(1) = 18.22$, $p < .001$. Participants reported a wide range of education: no high school diploma ($n = 4$, <1%), high school/GED ($n = 75$, 11%), some college ($n = 205$, 29%), two-year college degree ($n = 90$, 13%), four-year college degree ($n = 249$, 35%), master's degree ($n = 71$, 10%), doctoral degree or professional degree ($n = 12$, 2%).

Results

Once again, size ratings for the models showed a high degree of internal consistency both for men ($\alpha = .90$) and women ($\alpha = .88$). Similarly, attractiveness ratings were highly internally consistent for both for men ($\alpha = .92$) and women ($\alpha = .92$). Thus, as in Study 1, we created composite scores for size and attractiveness by averaging the ratings of all 13 images.

Size and Attractiveness

Similar to Study 1, the models were perceived as very thin. Mean composite size ratings for individual models were all below the midpoint of the scale, ranging from −1.82 to −.13 (all in the "too thin" range). Models were also generally perceived as attractive, with the composite attractiveness rating falling slightly above the midpoint of the scale. However, there was again notable variability for individual models (mean attractiveness ratings ranging from −.72 to 1.65). As an exploratory analysis, we examined correlations between participants' age and composite ratings. Age was not significantly correlated with ratings of size of the models' bodies, $r(706) = -.03$, $p = .39$, or ratings of the attractiveness of the models' bodies, $r(706) = -.006$, $p = .87$. Because women were more likely than men in the present sample to identify as sexual minorities, we examined composite ratings of thinness and attractiveness (for both self and other gender ratings) to determine if ratings by heterosexual men differed from ratings by sexual minority men. We then repeated these analyses comparing heterosexual women to sexual minority women. No significant differences emerged ($ps > .15$).

Table 3 Mean comparisons relevant to each research question, study 2

Rating of Models:	*M*	*M*
(a) Research Question 1		
	Women rating models	Men rating models
Body Size	-1.04_a	$-.89_a$
Attractiveness	$.42_b$	$.84_b$
(b) Research Question 2		
	Women rating models	Men guessing women's ratings
Body Size	-1.04_a	$-.68_a$
Attractiveness	$.42_b$	$.82_b$
	Men rating models	Women guessing men's ratings
Body Size	$-.89_c$	$-.45_c$
Attractiveness	$.84_d$	1.40_d
(c) Research Question 3		
	Women rating models	Women guessing men's ratings
Body Size	-1.04_a	$-.45_a$
Attractiveness	$.42_b$	1.40_b
	Men rating models	Men guessing women's ratings
Body Size	$-.89_c$	$-.68_c$
Attractiveness	.84	.82

Different subscripts across each row indicate a significant difference ($p < .05$). The confidence interval and standard deviation for each mean can be found in Table 1

Research Question 1

Unlike in the college student sample, ratings by Mturk respondents showed small-to-moderate, significant gender differences in ratings of models' size, $t(705) = 3.45$, $p = .001$, $d = 0.26$, and attractiveness, $t(705) = 5.88$, $p < .001$, $d = 0.44$ (see Table 3a). Women rated the models as closer to the "too thin" side of the rating scale (i.e., as less ideal), and men rated the models as significantly more attractive than the women did. Ratings of attractiveness of models' bodies and body size were positively correlated for both men, $r(356) = .51$, $p < .001$, and women $r(351) = .62$, $p < .001$. In other words, as models were rated as closer to the "just right" anchor on the size scale, they were also rated as more attractive. Similar to Study 1, both men's, $t(355) = -29.06$, $p < .001$, $d = 1.54$, and women's, $t(350) = -34.15$, $p < .001$, $d = 1.83$ ratings of thinness were significantly below the midpoint of the scale.

Research Question 2

For body size, there was a significant difference between women's actual ratings of the models and how men guessed women would rate the models, $t(705) = 6.91$, $p < .001$, $d = 0.52$ (see Table 3b). There was also a significant difference between women's actual attractiveness ratings and how men guessed women would rate the images, $t(705) = 5.35$, $p < .001$, $d = 0.40$. Men guessed that women would find the models' body size more ideal and find the models more attractive than women actually did.

Women also overestimated how ideal men would find the models' bodies, guessing men would be less likely to rate the models' bodies as too thin than men actually were, $t(705) = -10.98$, $p < .001$, $d = 0.83$. Similarly, women guessed that men would rate the models' bodies as significantly more attractive than men actually did, $t(705) = -8.87$, $p < .001$, $d = 0.67$. Although both men and women were generally inaccurate with respect to how the other gender would perceive these images, based on effect sizes, women again overestimated both how attractive and how ideal men would find the models' bodies to a greater extent than the men overestimated women's ratings.

Research Question 3

As in Study 1, women guessed men would perceive the models as significantly closer to the "just right" portion of the thinness scale than they (the women) did, $t(350) = -15.94$, $p < .001$, $d = 1.12$ (see Table 3c). Additionally, women guessed men would rate the models' bodies as more attractive than they (the women) did, $t(350) = -18.12$, $p < .001$, $d = 1.09$. Similarly, there was a significant difference between men's ratings of the models' body size and how men guessed women would rate the models' body size, $t(355) = -4.40$ p $< .001$, $d = 0.31$. In contrast with Study 1, there was not a

significant difference between men's ratings of the models' bodies and how men guessed women would rate the models' bodies' attractiveness, $t(355) = .29$, $p = .77$, $d = 0.02$. In sum, women believed the men would rate the models' bodies as more ideal than they themselves did.

Discussion

Unlike participants in the college student sample in Study 1, Mturk participants showed small-to-moderate gender differences in ratings of both the size and attractiveness of models in thin-ideal media images taken from women's fashion and beauty magazines. Women rated the models' body size as less ideal than men did (i.e., closer to the "too thin" anchor on the scale), and men found the models' bodies more attractive than women did. Also contrasting with Study 1's results, men in the Mturk sample did not indicate that they believed women would find the models' bodies more attractive or closer to the ideal size than they (the men) did. Ratings by women in the Mturk sample followed a pattern identical to the college women in Study 1. Specifically, women guessed that men would find the models' bodies more attractive and closer to ideal size than they (the women) did.

The same pattern of misperceptions identified in Study 1 emerged in Study 2. Both men and women significantly misestimated the other gender's reactions to these thin-ideal images. Both men and women anticipated that the other would rate the models' bodies more positively than they actually did (both in terms of size and attractiveness).

General Discussion

Idealized print media images of women are nearly universally very thin (de Freitas et al. 2018; Wasylkiw et al. 2009). In two large, online samples (one comprising U.S. undergraduate students and one comprising a wide age range of U.S. adults), we asked men and women to rate the bodies of models shown in a set of these thin-ideal images taken from women's fashion magazines. We found evidence to support the claim that women may be overestimating how thin men like women's bodies to be. In a finding that parallels Fallon and Rozin's (1985) early work using body silhouette scales, women predicted that men would rate the models' bodies as more ideal/attractive than they (the women) did. In an extension of Fallon and Rozin's classic studies, we demonstrated that *both* men and women misperceived each other's reactions to the very thin body type that is typical of fashion models. Both genders overestimated how ideal the other gender would find the models' body size and how attractive the other gender would find the models. College women's predictions of how college men would rate the models' bodies were particularly inaccurate, with effect sizes around a full standard deviation. Overall, these results are consistent with the notion that media images can act as reflected appraisals, providing women with information regarding others' views of the ideal body (Milkie 1999). In other words, some women may internalize the thin body ideal shown in media images in part because they believe this is the body shape preferred by men. Men may believe that women find this body type ideal simply because women are the primary consumers of the fashion-related media sources that embrace it.

Although the present results were generally consistent between the two samples in our studies (college students vs. online participants from Mturk), there were some differences. In the Mturk sample, which included a wider age range, women rated the models' body size as less ideal than the men did; in the college student sample, body size ratings did not vary by participants' gender.

The current findings are consistent with several lines of research suggesting that men do not find women with an ultra-thin body size as attractive as women think men do (Bergstrom et al. 2004; Grossbard et al. 2011). Not only has research indicated that women often select an ideal female body type that is thinner than men select, but several researchers have argued that women may not be aware that men prefer a larger female body size (Cohn and Adler 1992; Fallon and Rozin 1985; Grossbard et al. 2011; Lamb et al. 1993; Rozin and Fallon 1988). The results of the current studies provide evidence in favor of both arguments.

Limitations and Future Directions

Although using images of models from fashion magazines rather than silhouette scales may have increased the ecological validity of our findings, the magazine images also led to some study limitations. Unlike in a silhouette scale in which a relatively full range of body sizes are represented, the models in these images were all thin. Participants did perceive the models as varying in degree of thinness, but ratings were nearly universally between "too thin" and "just right." As a result, our findings can shed light on how men and women perceive the bodies of fashion models, but they cannot directly answer the question of what body size men versus women find the most attractive or ideal. Additionally, unlike in a silhouette scale, the images differed in terms of pose, amount of skin shown, skin color, facial expression, hair style, breast size, and other variables that could contribute to overall attractiveness ratings. We found some evidence that men responded more favorably than women to the most sexualized images. However, because all the images we selected showed models' full bodies, the range of sexualization of the images was limited. Likewise, because we blocked out the models' faces in the images, the influence of facial prominence (e.g., Archer et al. 1983) could not be examined. In the future, researchers could consider careful Photoshopping of images to

systematically manipulate perceived body size of models while keeping other appearance indicators constant.

A second set of limitations to the current studies is related to the difficulty in comparing our college student sample to the Mturk sample. The differences in ratings between the two samples of participants could reflect a generational shift in how idealized media images of women are perceived and evaluated. However, such a conclusion would be highly speculative at this point given that beyond age, the two samples also differed in terms of demographic variables such as education level, socioeconomic status (SES), and race/ethnicity. Further, in the second sample, there was no correlation between age and ratings of the models' bodies. Although a very large and diverse sample would be required, future research should specifically examine whether ethnicity and SES are associated with perceptions of these types of media images. Such research is especially warranted given that some data suggest women's body satisfaction varies by SES and ethnicity (Botta 2000; Grabe and Hyde 2006; Kronenfeld et al. 2010). Likewise, research suggests that some Women of Color may be less inclined to identify with or idealize thin ideal media images that seem targeted at White audiences (Kraeplin 2011; Warren et al. 2005).

In the current studies, we did not examine whether women might misperceive *other women's* reactions to these images. It is possible that women overestimate the extent to which both men and women find the bodies of fashion models to be ideal. This is a promising area of future study given the power of same-gender peers to shape body image concerns (Dohnt and Tiggemann 2006; Stanford and Mccabe 2002). Future research could also use similar methodologies to examine perceptions of media images of idealized male bodies. It is interesting to note that one study suggested that men misperceive women's notions of the ideal male body in a similar manner to the pattern identified in the current studies, with men assuming women desire substantially greater muscularity than women actually do (Pope Jr et al. 2000).

Finally, an additional limitation of the current studies is that we did not assess participants' thin-ideal internalization directly. Future studies on this topic could test the extent to which estimates of others' reactions to these types of media images predict women's levels of internalization. Without such data, the connection between women's views about how men perceive thin ideal images and women's internalization of the thin body ideal remains speculative.

Practice Implications

Exposure to thin ideal media images has long been associated with body image disturbance in women (see Grabe et al. 2008; Want 2009 for meta-analyses). In general, this effect is thought to be moderated through social comparison processes (Dittmar and Howard 2004). However, an additional mechanism that may play a role is a type of third person effect. The third person effect refers to the tendency to believe that persuasive communications have a stronger impact on others than on oneself (Perloff 1999). Women may feel they are able to critique the ultra-thin body ideal, but believe men nonetheless hold them to this standard (Davison 1983; Milkie 1999). In other words, women may overestimate the extent to which men buy into beauty ideals that are reinforced through media imagery and underestimate men's ability to be critical of these ideals.

The current studies provide additional evidence that for both men and women, the ideal female body is not as thin as women's fashion magazines would suggest. Given that body ideals are shaped by perceptions about the types of bodies peers and potential romantic partners prefer (Calogero et al. 2007), shining light on the gap between media ideals and actual preferred body types could help to reduce the negative impact of thin ideal images. However, any such educational efforts must work to avoid framing this information in a way that encourages an objectified perspective on the body (i.e., viewing one's body only in terms of whether it is considered attractive by others; Frederickson and Roberts 1997). Instead of emphasizing the fact that men may prefer a heavier body than typically seen in media images of women, the focus should be on the fact that both men and women can and do endorse more realistic body ideals. It is imperative that researchers and practitioners avoid framing these findings in terms of advice regarding what type of body women should cultivate to best attract men—such advice risks being objectifying, demeaning, and heterosexist. Instead, the current results can be conceptualized as consistent with positive body image approaches that emphasize the importance of questioning and filtering out unrealistic or unhealthy media-reinforced body standards (Tylka and Wood-Barcalow 2015).

Bair et al. (2014) demonstrated that simply changing the description of an "average body" could change women's body ideals. Women in a heavier norm condition selected a less thin body ideal for themselves compared to those in a thinner norm condition. Combined with the results of the current studies, these findings suggest that one way to take the psychological sting out of ultra-thin media images of women is to remind women how common it is for others to reject an ultra-thin ideal. In other words, the body ideal we so often see in media images of women is not just a body type that deviates markedly from the average woman's body, it is also a body type that many others may not actually find to be "ideal." This social norms approach would be consistent with interventions successfully employed to address a variety of behaviors, from binge drinking (Lewis and Neighbors 2006) to energy conservation (Schultz et al. 2007). Several successful body image programs targeting girls and women send the message that the ultra-thin body ideal seen in media images is unrealistic or unhealthy (Stice et al. 2008). The current studies suggest that

those designing such interventions should also consider reminding participants that they may be overestimating the extent to which men (and potentially other women) find such ideals attractive.

Conclusions

Although there are certainly numerous variables that contribute to women's internalization of a thin body ideal (Stice 2005; Thompson et al. 2012), the current findings are worth taking seriously for two key reasons. First, previous work has demonstrated that women's beliefs about men's preferences regarding body size can directly affect women's body satisfaction (Meltzer and McNulty 2015). Indeed, male peers' messages about attractiveness may affect women's body image more than messages from same-gender peers or parents (Stanford and Mccabe 2002). Second, internalization of the thin ideal is one of the strongest prospective predictors of eating disordered behavior in women (Stice 2002). Even if beliefs about men's body size preferences contribute only a small amount of variance to this internalization, this contribution is worth considering, especially given evidence that these beliefs may be easily challenged/altered (Stanford and Mccabe 2002).

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Compliance with Ethical Standards

Disclosure of Potential Conflicts of Interest The authors declare that they have no conflict of interest.

Research Involving Human Participants and/or Animals All procedures performed in both studies were in accordance with the ethical standards of the institutional review board at Northwestern University and with the 1964 Helsinki declaration and its later amendments.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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