

The Role of Image Body Size, Race, and Familiarity on Subsequent Evaluations of the Self

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Abstract

Past research examining the content of media programming has shown women in the media tend to conform to certain beauty and body standards, with the dominant standard being one of “thinness.” Because this thin ideal is so well-documented, there has been an interest in examining the effects of those portrayals on media consumers. Previous research has demonstrated the media can play an important role in causing body dissatisfaction among women. This research builds upon prior studies by conducting an experiment exploring the interaction among image familiarity (the image was of a female celebrity or unknown model), body size (the female was thin or overweight), and race (the female was White or Black) and how those three items could affect participant body satisfaction. Unlike most prior research, the sample was diverse, allowing analysis examining any differences related to participant gender or race. Results suggest there were, indeed, different psychological effects based upon the size, familiarity, and race of the female image viewed, and the effects differed by race. Unlike previous research, there were no differences between genders. Implications from these results are discussed.

### The Role of Image Body Size, Race, and Familiarity on Subsequent Evaluations of the Self

In today's digital world, it is hard to escape exposure to images of celebrities and models appearing, seemingly, everywhere. Whether it is music stars like Lady Gaga, movie stars like Jessica Alba, or manufactured stars like Kim Kardashian, there is currently an obsession with celebrities, and especially female celebrities, who are constantly followed so the public can know exactly where any of them have been, what they were wearing, and even who they were with. It is important, then, to pause and question what the effect may be on one's own morale and psyche when everyone is constantly seeing images of these women. With very few exceptions, these celebrities are very thin and attractive—is it possible the constant exposure to their images could cause someone to become dissatisfied with the way he or she looks?

While there are many influences determining what one's body image ideal may be, it is evident from past research the media play an important role in creating an individual's beauty ideals. Indeed, recent discussions of popular culture and media content (e.g., Durham, 2008; Northup & Liebler, 2010; Opplinger, 2008) suggest the beauty ideals present in the predominantly White media provide narrow definitions of what is attractive, often emphasizing sexualized imagery, and that the "thin ideal" continues to dominate (e.g., Engeln-Maddox, 2006; Fouts, 1999; Fouts & Burggraf, 2000; Wiseman et al., 1992).

The reliance on and reinforcement of the thin ideal is especially important because of research suggesting body-related images are automatically processed (Watts, Cranney, & Gleitzman, 2008) and tend to lead to negative psychological and behavioral outcomes (e.g., Anschutz, Engels, Becker, & Van Strien, 2009; Bell, Lawton, & Dittmar, 2007). Indeed, in a recent meta-analysis, Grabe, Hyde and Ward (2008) concluded media exposure to thin beauty ideals is related to body image disturbance. Similarly, Carlson Jones, Vigfusdottir, and Lee

(2004) showed there to be a direct relationship between exposure to media and body dissatisfaction. This all strongly suggests individuals are susceptible to media's influence and the beauty images portrayed can have a negative effect on one's self perception.

Therefore, the question is not *if* body dissatisfaction can occur from exposure to the media's ideal, but *when* and to *what effect*? In order to help answer those important questions, it is helpful to consider two theoretical frameworks: Self-Discrepancy Theory (SDT) and Social Comparison Theory (SCT).

When introduced in 1986 by Higgins, Bond, Klein, and Strauman, SDT argued the self had two representations: Domains of the Self and Standpoints on the Self. They defined "domains of the self" as having three distinct groups: a) The actual self, which is a person's representation of how they actually are (e.g., I am overweight); b) The ideal self, which is the representation of how a person would prefer to be (e.g., I want to be skinny); and c) The ought self, which are the attributes one believes one should possess (e.g., my boyfriend wants me to be skinny). Discrepancies between the actual and ideal self as well as the actual and ought self can lead to emotional disturbances.

The distinctions between selves become clearer when considering the two different "standpoints on the self," which are that individuals can either judge themselves from a self standpoint (using one's own beliefs) or the standpoint of someone else. Therefore, a self standpoint refers to any actual/ideal discrepancy, since both are based on one's own beliefs, whereas another's standpoint refers to any actual/ought discrepancy. Furthermore, Higgins and colleagues (1986) conceptualized ideal discrepancies as representing the absence of a desired positive outcome, which leads to depression, whereas ought discrepancies represent the presence or threat of a negative outcome, which leads to anxiety.

The SDT framework can be used to contextualize effects from the media. Because the media contain messages about how to look, it can be assumed those images give many people their ideal body images against which they may compare their actual selves. Comparing oneself to the idealized and thin media image would most likely lead to an actual-ideal discrepancy. It is also possible the media can activate actual-ought discrepancies, as those types of discrepancies relates to the threat of a negative outcome – in other words, the threat of *not* being like the media's ideal.

Of course, for these media messages to have any effect, a comparison has to be made. Social Comparison Theory (SCT) argues individuals have a natural and innate drive to compare themselves with others (Festinger, 1954). Two general types of comparisons can be made: upward comparisons, wherein individuals compare themselves to those who are better than they are in some aspect; or downward comparisons, which involve the opposite – comparing oneself to someone who is somehow worse than you are in the comparative trait. Upward comparisons generally lead to a depressed state, whereas downward comparisons tend to lead to a happier state (Cattarin, Thompson, Thomas, & Williams, 2000).

While not specifically using the SDT or SCT frameworks, Smeesters, Mussweiler, and Mandel's (2009) results are particularly relevant for this present research. Among their conclusions, they found the extremity of the size of the model (e.g., very skinny versus moderately skinny) mattered. Although their results were primarily focused on the BMI of the participants themselves, it was apparent for many women, using either very skinny or moderately overweight models could negatively influence the participants' self-esteem. This suggests research should not just be focused on whether a model is "thin" or "overweight," but to what extent the model is either of those attributes. Applying this to the present research, particular

attention will be focused on comparing the effects of extremely thin and moderately overweight female images.

From a Social Comparison Theory approach, it is perhaps understandable an extremely thin or moderately overweight model could equally and negatively influence one's body image. In the case of the thin model, the comparison would presumably be the "typical" effect wherein one is comparing oneself to the impossible thin standard present in the media. For the moderately overweight model, on the other hand, the comparison could be based on the overall beauty of the individual, as well as her perceived success. In other words, although the moderately overweight models do not possess the same impossible-to-obtain weight standard, they are still flawless in all other ways and being highlighted in the media for that reason.

While intriguing, the research of Smeesters, Mussweiler, and Mandel (2009) did not examine one feature of the advertisement that could play an important role in understanding the effects: the level of familiarity the participants had with the models shown. Presumably, the participants were unfamiliar with any of the women shown in the images in their research because they were only using images of models—not celebrities. Is it possible recognizing the women in the images would lead to greater or enhanced negative effects?

This question is largely based in the assimilation and contrast literature from social psychology (Stapel & Koomen, 2001). This research has suggested the more distinct (or familiar) a prime is, the more likely it is to be used as a standard of comparison (Stapel, Koomen, & van der Pligt, 1997). For example, participants who were told to make intelligence judgments were more likely to use "Einstein" as a standard of comparison than they were to use "professor," even though both were seen as being related to intelligence. In this way, the more distinct prime was able to wield more priming influence. Applying this to the current research,

familiar primes can be conceptualized as images distinct and known to the participants, whereas less familiar images would include those not distinct or familiar. Specifically, familiar images would be those of known celebrities whereas unfamiliar images would include models the participants have never seen before. In this way, celebrities would represent a beauty ideal in much the same way Einstein specifically relates to intelligence, whereas a model would be a less distinct or familiar representation of beauty in the same way professor relates to intelligence. Both celebrity and model images relate to certain standards of beauty, but in distinctly different ways.

One difference noted in prior research is the body image effects vary depending on the gender and race of the participants. In a recent meta-analysis, Myers and Crowther (2009) examined 156 studies and concluded body dissatisfaction stemming from comparisons is stronger for women than for men. Others (e.g., Akan & Grilo, 1995; Miller, Gleaves, Hirsch, Green, Snow, & Corbett, 2000; Molloy & Herzberger, 1998) have consistently found there are differences among races when it comes to body image disturbances, with the typical conclusions being Caucasians have greater body dissatisfaction than other races. This small but consistent difference was also confirmed in a meta-analytic review (Grabe & Hyde, 2006). However, most past research has not used a fully crossed research design with a diverse sample who viewed manipulated conditions including both White and non-White images. Rather, most experimental research has used White images. Based on Social Comparison Theory, it is perhaps not surprising there are at times insignificant results among the non-White participants when they were viewing White images.

Based on this literature, the following hypotheses and research questions are proposed:

H1a: Exposure to a thin female image will negatively affect body satisfaction among those female participants who have had self-discrepancies activated.

H1b: Exposure to a familiar thin image will intensify the prime's effect, thereby yielding stronger priming effects as compared to an unfamiliar thin image.

H2a: Exposure to a moderately overweight female image will negatively affect body satisfaction among those female participants who have had self-discrepancies activated.

H2b: Exposure to a familiar moderately overweight female image will intensify the prime's effect, thereby yielding strong priming effects as compared to an unfamiliar thin image.

RQ1: Will there be any differences based on the race of the participant?

RQ2: Will there be any differences based on the gender of the participant?

For each of these hypotheses, self-discrepancy activation will be indicated by an increase in overall negative affect. While research suggests actual-ideal and actual-ought discrepancies trigger different psychological reactions, those actions are nevertheless associated with an overall increase in negative affect and therefore one measure will be used. Priming effects relate to the extent to which the affective concept the prime triggers will significantly contribute to (predict) the subsequent evaluation (see Roskos-Ewoldsen, Klinger, & Roskos-Ewoldsen, 2007 for review of priming study methodologies).

### Method

In a 2 (thin image, moderately overweight image) x 2 (familiar image, unfamiliar image) x 2 (White image, Black image) between-subjects design, participants were shown via an online experiment a manipulated screenshot from the *Women's Health* website. After exposure to the website, participants completed relevant measures before being debriefed.

### *Participants*

Two hundred thirty-three participants were recruited from two large, introductory communication theory courses at a public university located in the Southwest. The students were offered extra credit in exchange for their participation.<sup>1</sup> There were more women (68%) than men, although no significant differences were found on any measure due to gender, so both genders were analyzed together. The sample had more White participants (61%) than non-White; however, of the non-White participants, there was a sufficient Black population to allow for full data analysis. Accordingly, only White or Black participants were included in analysis. All other races were excluded.

### *Procedure*

Participants who signed up for the extra credit were emailed a link to an online survey. After giving consent, participants read they were participating in a research study designed to see what features of websites they liked most. Accordingly, they were told they would see a number of screenshots from actual websites they would later evaluate.

The first set of questions encountered was demographic questions. Once those were completed, the participants were informed they were going to see various screenshots of actual websites. In between each screenshot, they were told they would have to answer questions related to themselves so the researchers could better understand some of their attitudes and beliefs. The participants then proceeded to encounter one of the randomly assigned (by the computer) manipulated *Women's Health* screenshots. They were instructed to read the page just as they would read any other website they might visit during the day.

After viewing the manipulated website, the participants continued to a page with the dependent measures. After completing those measures, the participants rated the *Women's*

*Health* screenshot on a number of different features. They then continued to view other websites unrelated to this study. Upon completion of the entire procedure, participants were taken to a webpage with information about the study. Specifically, participants were told the websites they viewed were not real but had been manipulated to contain different images and text. Contact information was included if they had additional questions, as were suggested readings if they were interested in the topic.

### *Stimuli*

The stimuli used were manipulated “screenshots” from the online website for *Women’s Health* magazine (see Figure 1). The manipulated content included the image and the accompanying headline. For familiar images, the pictures were either of familiar thin celebrities who were White (e.g., Taylor Swift) or Black (e.g., Halle Berry), as well as moderately overweight celebrities who were white (e.g., Adele) or Black (e.g., Octavia Spencer); for the unfamiliar images, thin or moderately overweight models were used (who were White or Black).

Importantly, all images were pre-tested using 107 participants drawn from the same courses as the main study to ensure three things: a) all women were seen as equally “attractive” (measured on a 7-point semantic differential, where 1=very unattractive and 7=very attractive), b) all celebrity images were familiar to the participants (measured on a 7-point semantic differential, where 1=very unfamiliar and 7=very familiar), and c) all the model images were unfamiliar to the participants (measured with the same item as the celebrity). Participants were recruited in a similar fashion as the main study and received extra credit for their participation. Importantly, none of the participants in the pre-test took part in the main study. Based on their responses, all images (regardless of familiarity and size) were rated as similarly attractive. For the model images, none were familiar to the participants, whereas the celebrity images were all

indicated to be familiar. In order to further ensure the celebrities were “recognized” in the main study, text was added below the image specifically naming the celebrity.

By establishing all of the images were seen as equally attractive ensured body size or familiarity was not being confounded by attractiveness. In other words, if images of celebrities were seen as more attractive than models, regardless of weight, than the familiarity manipulation would not have been successful. Similarly, if the thin images were seen as more attractive, the body size manipulation would not have worked. However, because all were seen as equally attractive and because the celebrities were familiar while the models were not, this should represent an effective manipulation wherein the only two attributes being manipulated were the size of the models and the familiarity of the women present in the images.

To further ensure a successful manipulation of body size, nine graduate students sorted the images into categories based on the contour drawing developed by Thompson and Gray (1995). Thompson and Gray developed and validated a series of nine contour drawings of females representing different body sizes. All graduate student raters agreed the thin images (familiar and unfamiliar) were in the thinner half of the rating scale while the overweight images (familiar and unfamiliar) were in the heavier half of the rating scale. This further corroborates the argument that only this single attribute is being manipulated.

Accompanying the image was a headline and text matching the condition. The text would suggest being thin is healthy or being overweight is healthy. The text matched the images to create a redundant message condition. In other words, Taylor Swift was always accompanied by the text about thin being healthy whereas Adele was always accompanied by text about overweight being healthy.

All other aspects of the webpage were held constant. Most features on the website were taken from the actual *Women's Health* website. One major difference was all other images were removed from the manipulated website to ensure only the manipulated image could be used for comparison. All other images on the page were replaced with cartoon icons.

### *Relevant Measures*

In line with previous priming research, the single item “To what extent are you dissatisfied with your body right now?” served as the primary dependent variable. Response choices were on a 5-point scale ranging from 1=Very Slightly or Not At All to 5=Extremely. Although there are scales available that could have also served as the primary dependent variable (e.g., Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002), priming research often uses a single item in favor of multiple items to test for effects. There is a large body of research indicating single-item measures enjoy the same predictive validity as multiple-item measures (Bergkvist & Rossiter, 2007; Gardner, Cummings, Duhman, & Pierce, 1998). Because single-item measures have similar predictive validity, and because priming effects tend to dissipate quickly and could be influenced by responding to a series of closely related questions, the single-item question relating to body image was used.

With respect to the prime, which was intended to activate positive or negative affect, participants rated how they felt about themselves using items from the PANAS-X scale (Watson & Clark, 1994). The PANAS-X scale has consistently been shown to be both a reliable and valid measure of positive and negative affect. Five items from the PANAS-X related to anxiety were used for the first composite: tense, worried, nervous, upset, and distressed. Five items related to depression were used for the second composite: sad, blue, downhearted, lonely, and alone. Anxiety items ( $\alpha = .82$ ) were averaged into a composite score of general negative affect related

to anxiety ( $M = 1.78, SD = .77$ ). Depression items ( $\alpha = .89$ ) were also averaged into a composite score of general negative affect related to depression ( $M = 1.59, SD = .68$ ). Although Self-Discrepancy Theory predicts either anxiety or depression could be activated, the two measures were highly correlated ( $r = .68, p < .001$ ) so they were averaged together to represent a participant's overall negative affect ( $M = 1.69, SD = .68$ ). This composite was the key variable used to assess the prime's effect on overall evaluations of the self. Specifically, the intent was to test the extent to which participants' affective responses contributed to the prediction of their overall evaluation of themselves, depending on the nature of the prime.

Among the criteria available to predict overall evaluations of the self were participants' assessments on a 5-point scale (1 = Very Slightly or Not At All to 5 = Extremely) the degree to which they currently felt: content ( $M = 3.38, SD = 1.01$ ), happy ( $M = 3.07, SD = 1.14$ ), angry ( $M = 1.32, SD = .72$ ), and afraid ( $M = 1.31, SD = .76$ ). These variables were added as control variables to further isolate any predicted effects related to the measured negative affect.

## Results

In line with previous priming investigations, a hierarchical regression analysis was used to test how well the prime influenced subsequent overall evaluations based on image body size and/or familiarity of the image (see Table 1). Specifically, the analysis tested how well overall negative affect predicted satisfaction with the self, in addition to whether the influence of affect was moderated by the type of prime (thin positive or overweight positive, unfamiliar or familiar image). All continuous variables were centered for analysis (Aiken & West, 1991). Because there is a growing body of research suggesting White and Black participants react differently to body image stimuli, the two groups were analyzed separately.

### *White Participants*

Considering first the White participants who viewed the White images, entered in the first step of the hierarchical regression model were the above control variables and main effects of overall negative affect, image valence (large is good = 0, thin is good = 1) and image familiarity (unfamiliar=0, familiar=1). Entered in Step 2 were all two-way interactions. Entered in Step 3 was the three-way interaction.

Overall negative affect ( $B = .57, SE B = .19, p < .01$ ) best predicted participant evaluations of the self in Step 1, when the type of prime was not taken into account,  $R^2 = .38, F(7, 68) = 5.85, p < .001$ . The addition of the two-way interactions improved upon the initial model,  $\Delta R^2 = .08, \Delta F(3, 65) = 3.23, p < .05$ . The addition of the three-way interaction ( $B = 1.16, SE B = .52, p < .01$ ) also yielded a significant improvement, suggesting the priming effects are explained by both the type of message and familiarity of the image, Step 3  $\Delta R^2 = .04, \Delta F(1, 64) = 4.91, p < .01$ .

Simple slope analyses were performed to examine the significant message X familiarity X negative affect interaction. Specifically, the contribution of negative affect was evaluated for each combination of message and familiarity. The slopes created by the analysis were anchored by the observed centered minimum and maximum for overall negative affect. As can be seen in Figure 2, the contribution of negative affect in predicting overall views of the self was largest in the thin-good, familiar image condition (slope = .95) followed by the thin-good, unfamiliar image condition (slope = .72). The large-good, unfamiliar image condition had the next largest slope (= .65), with the large-good, familiar image having the smallest slope (= -.44).

According to subsequent one-tailed  $t$ -tests (see Aiken & West, 1991, p. 17), only the large-good, familiar image slope did not significantly differ from zero. All other slopes significantly differed from zero. Additional one-tailed  $t$ -tests showed the large-good, familiar

slope significantly differed from the other slopes, as did the thin-good, familiar slope. These results provide support among the White participants for Hypothesis 1 as exposure to the thin images did yield significant priming. Moreover, support for Hypothesis 1A was also garnered as the largest effect was found for the familiar image, indicating the priming effect was intensified. Hypotheses 2 was partially supported, as the unfamiliar but moderately overweight image did yield a significant priming effect; however Hypothesis 2A was not supported as there was no effect for the familiar and overweight image; the implications from these results will be discussed below.

Considering next the Black image condition for the White participants, the overall model in Step 1 was significant,  $R^2 = .58$ ,  $F(7, 59) = 11.70$ ,  $p < .001$  with negative affect ( $B = 1.51$ ,  $SE = .22$ ) being the strongest predictor. The addition of the two-way interactions did not significantly improve the model  $\Delta R^2 = .02$ ,  $\Delta F(3, 56) = .79$ ,  $ns$ , nor did the addition of the three-way interaction,  $\Delta R^2 = .01$ ,  $\Delta F(1, 55) = 1.63$ ,  $ns$ . These results suggest when the White participants were exposed to the Black images, no priming effect occurred. As will be discussed in detail in subsequent sections, this suggests in response to the first research question, which relates to whether the effects differ based on race, the answer is a resounding “yes.”

### *Black Participants*

Regression analysis will be conducted for Black participants in a similar fashion as above. Considering first the White image conditions, the overall model in Step 1 was significant,  $R^2 = .65$ ,  $F(7, 25) = 8.19$ ,  $p < .001$  with negative affect ( $B = .80$ ,  $SE = .23$ ) being the strongest predictor. The addition of the two-way interactions did not significantly improve the model  $\Delta R^2 = .01$ ,  $\Delta F(3, 22) = .23$ ,  $ns$ , nor did the addition of the three-way interaction,  $\Delta R^2 = .02$ ,  $\Delta F(1,$

21) = 1.58, *ns*. These results suggest unlike the White participants, when exposed to the White image, Black participants showed no priming effects.

Considering next the Black image conditions (see Table 2), overall negative affect ( $B = .66$ ,  $SE B = .21$ ,  $p < .01$ ) best predicted participant evaluations of the self in Step 1, when the type of prime was not taken into account,  $R^2 = .62$ ,  $F(7, 25) = 10.23$ ,  $p < .001$ . The addition of the two-way interactions did not significantly improve upon the initial model,  $\Delta R^2 = .03$ ,  $\Delta F(3, 22) = 1.03$ , *ns*. However, the addition of the three-way interaction ( $B = 1.51$ ,  $SE B = .69$ ,  $p < .05$ ) yielded a significant improvement, suggesting the priming effects are explained by both the type of message and familiarity of the image, Step 3  $\Delta R^2 = .04$ ,  $\Delta F(1, 21) = 4.78$ ,  $p < .05$ .

Simple slope analyses were again performed to examine the significant message X familiarity X negative affect interaction. As can be seen in Figure 3, the contribution of negative affect in predicting overall views of the self was largest in the large-good, unfamiliar image condition (slope = 1.19) followed by the thin-good, familiar image condition (slope = 1.03). The large-good, familiar image condition had the next largest slope (= .4), with the thin-good, unfamiliar image having the smallest slope (= .32).

According to subsequent one-tailed *t*-tests, only the two largest slopes significantly differed from zero. Those two slopes, which were the large-good, unfamiliar image and the thin-good, familiar image condition, differed from the other two slopes, which did not differ from each other. As will be discussed next, these results provide partial support for the hypotheses, but in ways that are intriguing especially when compared to the results from the White participants. Among the Black participants, Hypothesis 1 was partially supported, with Hypothesis 1A being fully supported as it was only the familiar and thin image yielding significant priming effects. Hypothesis 2 was also partially supported, as the moderately overweight image did yield an

effect—but only the unfamiliar image, meaning H2A was unsupported as the familiar image did not appear to intensify the negative effect. Overall, these results suggest there were no negative effects on body image when Black participants were exposed to the thin model and large celebrity, but there were negative effects when exposed to the large model or the thin celebrity.

### Discussion

According to Self-Discrepancy Theory (Higgins, Bond, Klein, & Strauman, 1986), activation of actual/ideal or actual/ought discrepancies can lead to an increase in negative affect, specifically feelings of depression or anxiety. In this present research, it was predicted exposure to images of thin (Hypothesis 1) or moderately overweight (Hypothesis 2) women in the media could activate negative affect in female participants, with the activation in turn leading to negative feelings about the self. By and large, this is exactly what was found. For those women who had discrepancies activated by the viewing of the images, there was an increase in negative affect, which led to more negative feelings about the self. This is a confirmation of the premise of SDT and further indicates it is an important theoretical framework to use when examining issues related to body image.

Social Comparison Theory (Festinger, 1954), on the other hand, would suggest the simple viewing of an image may not be enough to activate negative affect. Instead, only the viewing of images perceived to be similar to oneself should yield any effects. This, too, was found in the results, as only the viewing of the same or similar race images (White images for White participants, Black images for Black participants) yielded any significant priming effects. This serves to reinforce one of the key propositions of SCT and helps to further explain some results from prior research, which is that Black individuals are often presumed to not be as influenced by the media's ideals as White participants. This research would suggest otherwise, as

Black participants may not be as influenced by the White ideal, but they are still susceptible to negative effects when images of Black people are presented.

This is not the first research, though, to demonstrate negative body image effects based on media exposure. However, this experiment extended previous findings by considering how the level of familiarity each participant had with the image influenced subsequent evaluations of the self. Prior research (Stapel & Koomen, 2001) had suggested the more distinct or familiar a prime is, the more likely it will be used as a standard of comparison. In this present research, it was argued images of celebrities would serve as a more familiar prime than images of unknown models and would, therefore, be more likely to be used as a point of comparison. For the White participants, whom will be considered first, this is precisely what was found, as it was only the familiar overweight celebrity images not negatively impacting participants' views of themselves and the familiar thin celebrity images impacted views of the self significantly more than unfamiliar models did. In other words, the unfamiliar images served as effective primes, but not as effective as either of the familiar images.

When White participants were exposed to either moderately overweight or very skinny model images (i.e., images presenting women the participants were unfamiliar with), participants tended to have lower satisfaction with their bodies. Similarly, when White participants were exposed to a very skinny celebrity picture (i.e., a familiar image of a female celebrity who is known to the participants), participants also tended to feel worse about themselves. These results largely replicated previous research.

Interestingly, and where this research adds the most to our understanding of body image effects, is when White participants were exposed to a moderately overweight celebrity (that is, a familiar image of someone moderately overweight), there were no negative effects on body

satisfaction. While this is in many ways counter to what Smeesters, Mussweiler, and Mandel (2009) found in their research, it is clear from this experiment there is something important in making a comparison with an individual who you “know.” Approaching this from the perspective of comparisons, if a White participant saw a moderately heavy yet successful celebrity, it is possible this would lead to a feeling of body satisfaction as she is seeing an example of someone who does not fit the thin-ideal usually present in the media yet was able to find success. This could reduce anxiety about one’s own body.

The power of the familiar image can also be seen when examining the different slopes obtained in the subsequent analyses. The greatest slope was for the familiar-thin condition, which indicates the prime had the greatest effect in this condition. This is interesting because prior research has usually looked at the effects of generic, unfamiliar images of women. In this instance, the results suggest celebrities may have more power to influence how a woman feels about her body than just an unknown model. Apparently, having a familiar image provides a more solid anchor against which one can compare one’s own body.

For the Black participants, the results were similar and yet different in a couple of interesting ways. For one, the largest effects were found for both the unfamiliar-large condition and the familiar-thin condition, which means like the White participants, a skinny celebrity activated negative affect, but unlike the White participants, the large model also activated negative affect.

This is an interesting finding as it could point to the very different ideals existing for White as compared to Black people. Specifically, as has been discussed above, the beauty ideal dominant in the media for White people is that of thinness. In contrast, the ideal for Black individuals is different and typically larger (e.g., Northup & Liebler, 2010). If the ideal for Black

people found in the media is being large is to be desired, then it would actually make sense the large images could create a self-discrepancy in an individual. Therefore, when Black participants were exposed to a plus size model, it could have activated a self-discrepancy, which is exactly what appears to have happened here.

Unclear from the results is why the familiarity of the image yielded different effects with Black participants. Based on the literature, it was expected the familiar images would have the strongest priming effects because they would provide a clear anchor against which one can judge oneself, yet here the effects were similar for the known and unknown images.

This is not say the familiar image conditions yielded no priming effects. Statistically just as large as the large-unfamiliar slope was the thin-familiar slope, which is the same condition yielding the strongest priming effects for the White participants. It is interesting, among Black participants, it was the unfamiliar-large and familiar-good conditions both producing the strongest priming effects. Perhaps this speaks not only to the different beauty ideals among Black participants, but also to the fact those different beauty ideals are beginning to change and look a lot more like the dominant White ideals. In other words, the dominant beauty ideal for Black participants is still larger, which explains the results discussed above, but for many participants, they may have begun to adopt a thinner ideal, which would explain why the familiar-thin condition produced such strong results, too.

Producing no priming effects were the familiar-large and unfamiliar-thin conditions. This, in many ways, mirrors the results of the White participants. As with the White participants, those who see the larger celebrities appear to be using the prime in a different way—in a way not negatively affecting body image. Similarly, exposure to a thin model does not produce body

dissatisfaction. If the most dominant ideal remains for Black people being large is best, it would make sense seeing a skinny model would not produce priming effects.

Taken together, then, a few important conclusions can be made. First and foremost, the size of the female in the image mattered. Regardless of race, the familiar and thin images yielded the strongest negative effects, while the familiar and large images yielded no effects. This is an extremely important finding in this research and points to the importance of allowing there to be more plus-sized celebrities.

Next, it is clear the degree of familiarity matters when investigating the impact of the media on body dissatisfaction. For all participants, there was a significant interaction taking place suggesting the type of image (familiar or unfamiliar) mattered in how they impacted body image. Regardless of race, the familiar and thin images yielded the strongest negative effects, while the familiar and large images yielded no effects. The unfamiliar images, on the other hand, acted in a less consistent way in that they differed more by race. Based on the results, though, it is evident the familiarity should be taken into account in future research.

It is important to note in response to the second research question there were no gender differences found for either race. Unfortunately, there were not enough participants of each gender to be able to run the analyses separately, but the direction of the effects were similar regardless of gender. Although the results are counterintuitive, they do build upon and potentially confirm some previous research suggesting the female ideals can negatively affect men as well (see, for example, Aubrey & Taylor, 2009).

The exact reason the images affect men in a potentially similar way is not clear, but it is possible seeing images of attractive female celebrities could activate male anxiety, not because a male is directly comparing his body to the woman's, as would be the case with the female

participants, but perhaps because the men are comparing themselves against the male ideal necessary to attract one of those celebrity women. In other words, the young, attractive celebrity females, who are so well documented in the media, are often shown with equally young and attractive male counterparts. Based purely on conjecture, it could be possible the mere act of seeing the female celebrities could activate comparisons with the male the participants envision as being a potential equal to the females. Future research is warranted to see if this similar effect can be replicated and to try to understand the specific mechanisms of its operation.

Finally, it is important to reiterate all images used were extensively pre-tested to ensure they were all considered similarly “attractive.” This implies the negative effects of being exposed to these images operate very much at an unconscious level. In other words, while participants all rated the women as being the same in terms of attractiveness, the psychological effects of being exposed to the different women were not the same—their explicit ratings of the women differed from their implicit feelings about their own body satisfaction.

#### Limitations and Future Directions

There are a few important limitations worth mentioning. In this research, familiarity was operationalized to mean celebrity, meaning the manipulation of familiarity/unfamiliarity used either celebrity images or model images. Indeed, the images were pretested in order to ensure participants were familiar with the celebrities and not familiar with the models. Although this was the proposed manipulation, it is also possible there were other attributes – like credibility – manipulated, as celebrities might be seen as more credible than non-celebrities. Future research warrants further explication of the idea of familiarity and celebrity to further isolate the causes and effects obtained here.

It is also important to note the sample obtained was entirely drawn from a college population. It is possible different ages hold different ideals and so the effects may actually vary just as they did with race. Continuing to explore this area of research and including different ages, both older and younger, would be fruitful.

This research also only included one website manipulation. Future studies would do well to vary the manipulations and messages to determine when body image messages might be most or least powerful. For instance, it is well known younger females feel pressure to look good in order to attract men. It seems possible messages about being thin in order to find a man might wield even more powerful priming effects.

The media have incredible power to shape perceptions of the world – but more than the world, the media have the ability to shape perceptions of ourselves. In this study, the smallest negative effects on body satisfaction occurred after exposure to plus-sized celebrities. The media industry would do well to take note of this and make a determined effort to include a more diverse range of body sizes. Although these changes could be made out of good conscience, they could also do this to make money, as the recent success of Adele demonstrates size does not have to matter and consumers are ready, willing, and wanting to embrace role models of all shapes and sizes. Indeed, a great deal of the attention paid to Adele has been specifically because of her size and how she breaks the mold of what Hollywood typically thinks of as being beautiful. Adele is not alone in this recent trend, as the success of women like Melissa McCarthy demonstrates Hollywood can capitalize on using women of all shapes and sizes. Of course, changing the way Hollywood does business takes time, but based on the results of this research and the string of successes of plus-sized celebrities who stray from the standards of beauty, it is clear change cannot come soon enough.

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Footnotes

<sup>1</sup>The complete procedure, from participant recruitment to the images shown, was approved by the institution's IRB. Of note, the participants are given multiple opportunities during the semester to participate in research for extra credit, meaning this was not the only research opportunity. Further, because the research was conducted online, there is no reason to believe that a student's schedule would prevent him or her from having the time to complete the research as each had access to the link for approximately one month.

Figure Captions

*Figure 1.* Example screenshots from familiar and unfamiliar image conditions.

*Figure 2.* For the White participants viewing a White image, results of simple slope analysis exploring the significant image size X image familiarity X overall negative affect interaction predicting feelings about the self. Image was coded 0 = overweight image, 1 = thin image; familiarity was 0 = unfamiliar image, 1 = familiar image. Affect entails participants' overall negative affect at the time of the experiment. Lines anchored at minimum and maximum affect scores. All continuous variables are centered in the analysis ( $M = 0$ , possible range -3.5 to 3.5).

*Figure 3.* For the Black participants viewing a Black image, results of simple slope analysis exploring the significant image size X image familiarity X overall negative affect interaction predicting feelings about the self. Image was coded 0 = overweight image, 1 = thin image; familiarity was 0 = unfamiliar image, 1 = familiar image. Affect entails participants' overall negative affect at the time of the experiment. Lines anchored at minimum and maximum affect scores. All continuous variables are centered in the analysis ( $M = 0$ , possible range -3.5 to 3.5).

Figure 1

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**Being Thin is Healthy**  
 Researchers at Harvard University School of Medicine released the results of a new study today. The study, which tracked the life expectancy and rates of disease among over two million women, gave a clear indication that weighing less means living longer. More than just a longer life, though, those with lower body size were healthier and had far fewer incidences of cancer and heart disease. While some caution that the research does not indicate what about weighing more leads to... (More)

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 Researchers at Harvard University School of Medicine released the results of a new study today. The study, which tracked the life expectancy and rates of disease among over two million women, gave a clear indication that weighing more means living longer. More than just a longer life, though, those with higher body size were healthier and had far fewer incidences of cancer and heart disease. While some caution that the research does not indicate what about weighing more leads to... (More)

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Figure 2.

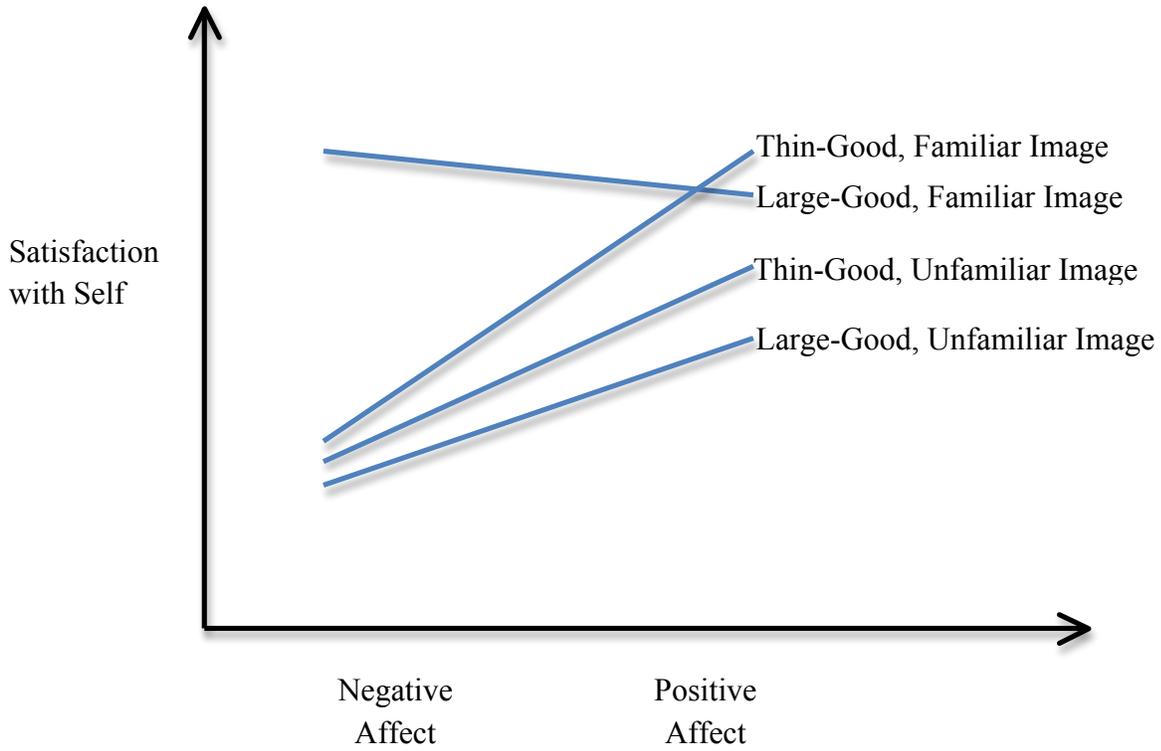


Figure 3.

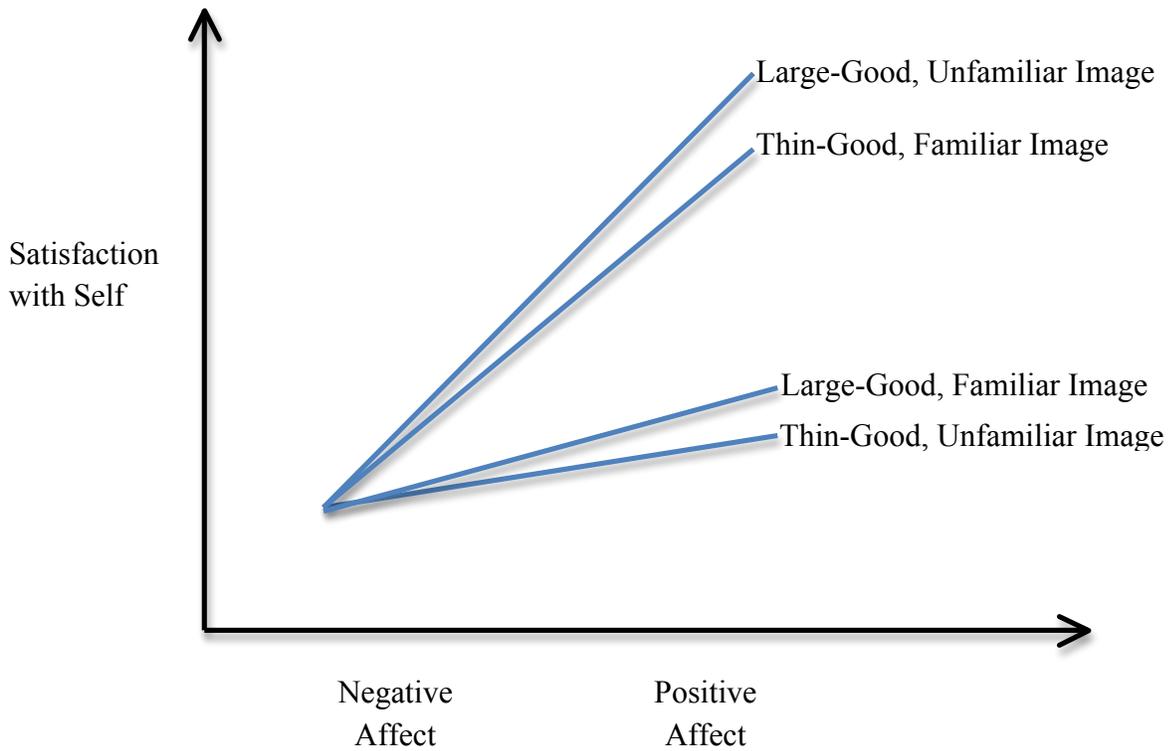


Table 1.

*Summary of Hierarchical Regression Analysis for Variables Predicting Overall Satisfaction with Self (White participants, White Image Condition) (N = 76)*

Variables	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Block 1									
Content	.05	.13	.05	.01	.13	.01	-.02	.13	-.02
Happy	-.22	.11	-.3*	-.24	.10	-.3*	-.22	.10	-.25*
Angry	.38	.15	.33*	.39	.15	.34*	.39	.14	.34*
Afraid	-.26	.18	-.23	-.17	.17	-.15	-.11	.17	-.10
Negative Affect	.57	.19	.41*	.35	.31	.25	.65	.33	.47*
Image Condition	.17	.20	.09	-1.1	.59	-.58	-.15	.73	-.08
Familiarity Condition	-.18	.19	-.09	.30	.39	.12	1.64	.75	.83*
Block 2									
Image x Familiarity				.30	.39	.12	-1.69	.97	-.71
Image x Affect				.63	.29	.65*	.07	.38	.07
Affect x Familiarity				-.45	.28	-.45	-1.09	.40	-1.08*
Block 3									
Image x Familiarity x Affect							1.16	.52	.84*

*Note.* Image coded as 0 = negative, 1 = positive. Familiarity coded as 0 = unfamiliar image, 1 = familiar image. Other variables rated on a 7-point scale from 1 (= extreme negative evaluation or feeling) to 7 (= extreme positive evaluation or feeling). Step 1:  $R^2 = 0.38$ ,  $F(7, 68) = 5.85$ ,  $p < .001$ . Step 2:  $\Delta R^2 = .08$ ,  $\Delta F(3, 65) = 3.23$ ,  $p < .05$ . Step 3:  $\Delta R^2 = .04$ ,  $\Delta F(1, 64) = 4.91$ ,  $p < .05$ . \* $p < .05$ .

Table 2.

*Summary of Hierarchical Regression Analysis for Variables Predicting Overall Satisfaction with Self (Black participants, Black Image Condition) (N = 33)*

Variables	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Block 1									
Content	-.04	.12	-.27	-.07	.12	-.07	-.07	.12	-.07
Happy	-.20	.09	-.3*	-.19	.09	-.24	-.17	.09	-.22
Angry	.46	.24	.28	.52	.25	.32*	.66	.24	.41*
Afraid	.04	.22	.02	.03	.25	.02	.01	.24	.01
Negative Affect	.66	.21	.40*	.64	.38	.39	1.19	.45	.73*
Image Condition	.14	.19	-.05	-.08	.57	-.04	1.05	.75	.54
Familiarity Condition	-.11	.19	-.06	-.62	.56	-.32	.59	.77	.31
Block 2									
Image x Familiarity				.63	.38	-.05	-1.44	1.01	-.67
Image x Affect				-.05	.37	-.04	-.87	.52	-.78
Affect x Familiarity				.09	.35	.07	-.80	.53	-.66
Block 3									
Image x Familiarity x Affect							1.51	.69	1.05*

*Note.* Image coded as 0 = negative, 1 = positive. Familiarity coded as 0 = unfamiliar image, 1 = familiar image. Other variables rated on a 7-point scale from 1 (= extreme negative evaluation or feeling) to 7 (= extreme positive evaluation or feeling). Step 1:  $R^2 = 0.62$ ,  $F(7, 25) = 10.23$ ,  $p < .001$ . Step 2:  $\Delta R^2 = .03$ ,  $\Delta F(3, 22) = 1.03$ , *ns*. Step 3:  $\Delta R^2 = .04$ ,  $\Delta F(1, 21) = 4.78$ ,  $p < .05$ . \* $p < .05$ .