The Effect of Model and Product Type on Advertising Effectiveness: Comparing Fitness and Fashion Brands

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Abstract

Previous research suggests that people high in social comparison and body dissatisfaction perceive advertisements with thin models poorly because such advertisements increase body-related anxiety. Other research has shown that people are more willing to purchase items modeled by thin models than natural models due to social desirability. The current study investigated whether the product type and model’s body type interact to impact advertising effectiveness. Participants viewed a fashion or fitness advertisement with either a thin, average, or plus-sized model. Then, participants reported how effective they thought the advertisement was, how much they compared themselves to others and their feelings regarding their body image. The results showed no effect of product type on the dependent variables, but there was an effect of model type on advertising effectiveness: Participants who viewed thin and average models rated the advertisement as more effective than participants who viewed a plus-sized model. Additionally, body satisfied individuals compared themselves more to the model, rating the advertisement as less effective. This research provides evidence that although it is commendable that advertising companies are using plus-sized models, utilizing these types of advertisements may be less effective in eliciting positive attitudes toward their brands.
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As a female, I have been taught to subconsciously compare myself to other women by society and the media. While I am fortunate to have a family that promotes body positivity and I am considered to be on the slender side, I still have the idea of being thin engraved into my brain as the standard of beauty. My mother who has a similar body shape to my own was brought up in a household that was hypercritical of their bodies. While my mom is very fit and slender, she was not always this way and was put on diet plans such as Weight Watchers as a child because she was not as thin as the other girls were. She would eat less in the cafeteria and constantly worry about what she ate so she could “look like the other girls.” When I look at pictures of my mom as a teenager, I would never categorize her as anything other than normal and I am repulsed by the idea that she was taught that she had to be thin to be pretty. While my mom is proud of her body and is body-positive now, I know it was a journey for her to get to where she is today. After meeting my father, she became aware of how her upbringing created a negative stigma around body image, an atmosphere she aimed to never create for her children. While this story may not resonate with everyone, many people, especially women, are frequently exposed to the thin ideal from both social interaction and the media (Dittmar and Howard, 2004). In today’s society, it seems as though people are more body positive than ever before, promoting healthy behaviors and the idea that everyone is built differently (Austin and Sobel, 2020).

Today, companies such as Athleta and Zara are using curvier models that better represent the average person. These strides towards diminishing the thin ideal through advertisements are
extraordinary, but are they effective? In the following study, the size of models in both fashion and athleisure advertising will be manipulated to assess their advertising effectiveness.

**Body Image and the Thin Ideal**

An issue in advertising is the concept of the thin ideal, which is defined as highly digitized and unrealistically thin women in the media (Borau and Nepomuceno, 2016). Over time, models have become slimmer, being 20% underweight on average, which has detrimental consequences such as glamorizing the thin ideal (American Psychiatric Association, 2000).

Dittmar and Howard (2004) investigated why women experience negative moods when looking at models exhibiting the thin ideal. In their study, women who worked as teachers or in the fashion industry viewed ostensible advertisements for perfumes. For participants assigned to the “thin image” condition, the advertisement images included thin models (i.e., size 2 clothing). For participants assigned to the “average-size” condition, the advertisement contained images of models who wore size 12 to size 14 clothing. Finally, participants assigned to the control condition viewed advertisements with no model images. After viewing the advertisements, participants completed measures to assess their level of ideal body internalization (i.e., the extent to which participants have internalized the notion that a thin body is the ideal body form), the extent to which they perceived the advertising as effective, and their degree of body-focused anxiety (i.e., the extent to which participants feel anxiety or stress about various parts of their bodies). The results showed no significant effect of model conditions on the perception of the brand. Among low internalizers, there was no effect of condition on body-focused anxiety. Among high-internalizing workers in the fashion industry, there was a modest effect of condition
on body-focused anxiety, such that among these women, people exposed to thin models had modestly (though statistically significantly) elevated levels of anxiety. However, among high-internalizing teachers, the effect of condition on anxiety was strong: Among these women, people exposed to thin models reported nearly twice as much anxiety. The idea of internalization paves the way for social comparison theory and its effect on advertisement effectiveness and the thin ideal. Advertisements tend to be of skinny models who do not represent the body shape of most American women, especially in fashion advertising. In the beauty industry, thin models are the norm due to the lack of diversity in body shape and the use of image alterations (Tiggemann et al., 2019). This lack of variation in body shape suggests that future research should explore how viewers respond to different types of models in the beauty industry.

While individuals who viewed thin models tended to report increased body dissatisfaction, the response to natural models was still unclear. Borau and Bonnefon (2017) explored this by testing the hypothesis that while natural models decrease body anxiety, they also trigger negative effects akin to disgust. These two reactions were suggested to have opposite effects on advertising performance. The researchers assessed the beauty industry, using skincare as their product of choice. The participants were placed into one of four conditions: natural oil, thin oil, natural cream, or thin cream. The natural conditions included images of models that the authors thought were “minimally altered models whose body size and complexion all pertain to a realistic range,” while the thin condition had altered models whose body size was unrealistic. In each condition, the participants were asked to browse through an online magazine with pictures of their assigned products. After the participants viewed the advertisements, they were asked questions regarding their body anxiety, attitude toward the product, and information about the
participants' bodies (BMI, height, and weight). The results showed that when looking at natural models, the participants rated the product less favorably and experienced repulsion, especially among participants who had a moderate or high BMI. Further, this repulsion mediated a negative impact of natural models on three measures of advertising performance. Participants who viewed natural models did not report an increase in their attitude towards the brand. Participants expressed a greater liking of the natural model but did not have the desire to purchase after viewing the advertisement due to the model not being “socially desirable”. The researchers do not recommend that advertisers use natural, unaltered models whose body size, complexion, and general attractiveness are within a realistic range because they lower purchasing intentions. These findings are meaningful because while individuals felt body-related anxiety after viewing thin models, these advertisements were more effective than those with natural models due to social desirability and feelings of repulsion.

As fashion and beauty brands are the biggest instigators of the thin ideal (Malkin, Wornian, and Chrysler, 1999; Silverstein, Perdue, Peterson, and Kelly 1986), researchers have spent great efforts to understand why this is the case. Tiggemann et al. (2009) examined the thinness fantasy, which describes the fact that some individuals think they are thinner after looking at skinny models, and thus become more body positive. The researchers studied the underlying processes involved in how women respond to thin-ideal media. In their study, participants looked at advertisements that featured a product with either a thin model or no model. All participants then answered a State Mood and Body Dissatisfaction scale that was conducted before and after viewing the advertisements. Then, in an orthogonal manipulation, participants assigned to the social-comparison condition were asked if they looked like the
model, people in the fantasy condition were asked questions about how exciting the model's life was, while people in the control condition were not asked any additional questions. The results indicated that individuals in the thin-model condition experienced more negative mood and body dissatisfaction than did those in the no-model condition, showing that the product itself had little effect on body image. Further, individuals in the fantasy and control conditions experienced a more positive mood than those in the social comparison condition. These results suggest that the thinness fantasy leads to a more positive mood, such that the more one looks at thin models, the less dissatisfied they become.

**Social Comparison**

A psychological theory that is commonly connected to the thin ideal is social comparison theory, which is the idea that people constantly evaluate themselves and others concerning superficial traits like attractiveness, wealth, intelligence, and success. Bocage-Barthélémy et al. (2018) studied the thin ideal to determine whether social comparison is an automatic or controlled process. In their study, the researchers started by administering an eating disorder inventory, which was used to measure participants’ body dissatisfaction before they viewed the advertisements. The participants were then placed into either a high or low cognitive load condition, in which participants were asked to retain a string of numbers, four in the low condition and ten in the high condition. All participants were then shown pictures of beauty products with or without a model. Once they viewed the advertisement, the participants completed a thought accessibility measure to see how fast it took them to create negative, positive, or neutral words from a string of letters. The results indicated that high cognitive load
individuals took longer to respond to negative words in the thin-ideal condition than in the accessories condition. The effect of thin-ideal exposure was not significant for women in the low cognitive load condition. The researchers attributed the difference in thought accessibility results to pre-occupation in the high cognitive load condition. In other words, when an individual has a lot on their mind, they are unable to consciously suppress social comparison, making it an automatic process.

Knowing that social comparison plays a significant role in the perpetuation of the thin ideal, Borau and Nepomuceno (2016) studied airbrushed advertisements to see whether disclaimer labels (labels that reject and point out digital manipulation) decrease one's level of social comparison. In Study 1, the participants were shown a magazine with thin models and were then asked to write about their attitudes towards the advertisements. Next, the participants were interviewed to better understand their emotions toward the images. The participants were asked to choose six images of the thin ideal from the magazines the researchers provided them with, and explain how they made them feel. After analyzing the reactions of the participants, the researchers classified them into four subgroups. The first subgroup are resists, composed of individuals who are defensive and criticize the thin ideal; they have negative emotions toward the thin models, finding them unrealistic. The second group is indifferent; these participants are detached and have little to no emotion towards the model. Hedonist people are naive to the idea of the thin ideal; they dream and feel delighted from the fantasy. The final subgroup is victims, who know the image is not real yet continue to compare themselves anyway, and therefore are fascinated and have mixed emotions after viewing thin models. While this study is descriptive only, it suggests that awareness of the digital manipulation of models does not necessarily have
the protective effects that were expected. Individuals experienced negative emotions in both the resistant and victim categories even though airbrushing was detected.

Researching further into social comparison, Bocage-Barthélémy et al. (2018) hypothesized that looking at a thin model would make it harder to generate words that relate to liking and loving oneself. In their study, the participants either looked at models who embodied the thin ideal, or images of the same models who were airbrushed to look slightly larger and more realistic in terms of body size. The participants were then given the Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI-BD, Garner, Olmstead, & Polivy, 1983) to measure body dissatisfaction. Then, the participants were given a lexical decision task, in which they were asked to indicate as fast as possible if a string of letters formed a word or a non-word by pressing a specific key on the keyboard. Some of these words connoted self-love (e.g., “to appreciate” or “to love oneself”), while others served as a control (e.g., “to stretch” or “to walk around”). Finally, the participants filled out a survey to indicate their desire for thinness and tendency to compare themselves to the models. The results demonstrated that individuals who were exposed to thin models had a longer response time when forming self-liking verbs than were those in the natural body condition. Additionally, participants assigned to the thin-model condition reported comparing themselves more to the models than did participants in the natural model condition. The hypothesis was therefore supported, such that after looking at the thin-ideal images, participants reportedly compared themselves to the model, making it harder to come up with positive words.
In terms of advertising effectiveness, Bower (2001) hypothesized that a negative mood would correlate with a poor review of a product. In their first study, the researchers asked women to look at images of a highly attractive model and a treadmill. Then, the participants completed a Likert scale questionnaire to measure the extent to which they compared themselves with the model, negative mood, and advertising effectiveness. The comparison questions were “How much does the item affect the model's looks?” and “How much would this product affect your looks?” If participants scored high on these comparison questions, the participants were labeled as comparers, while individuals who scored low on the questionnaire were labeled non-comparers. The results demonstrated that comparers had a more negative mood than non-comparers after looking at the advertisement. While this may seem like a given, people compare themselves to highly attractive people, thus having a negative mood after looking at advertisements. The less happy someone is, the more likely they are to rank products poorly. These findings are helpful in terms of the present study as it studies advertising effectiveness and the thin-ideal. In all, high levels of social comparison led to an increase in body dissatisfaction after viewing thin models that may lead individuals to review an advertisement poorly.

**Disclaimer Labels**

In recent years, advertising companies have begun to utilize disclaimer labels because they believe that the viewer’s knowledge of digital manipulation lessens the number of poor product reviews, therefore increasing revenue. Borau and Nepomuceno (2016) hypothesized that showing disclaimer labels before images of thin models would increase advertising effectiveness and might even bring more attention to the thin ideal. The participants viewed an advertisement
of a digitally manipulated thin model that was promoting firming cream with or without a disclaimer label. After viewing the image, the participants were asked questions regarding how the participants felt about themselves after viewing the images, if airbrushing was detected, and their attitude towards the advertisement. The results showed that participants in the disclaimer condition were more likely to acknowledge that the images had been digitally manipulated, but did not see the images as more unrealistic than those in the non-disclaimer condition. Further, the disclaimers did not significantly affect participants' emotional reactions or attitudes toward the advertisements. These findings suggest that disclaimer labels do not fully protect viewers from the dangers of the thin-ideal as participants who were in the disclaimer condition still saw the image as realistic. Thus, disclaimer labels do not seem to increase advertising effectiveness because the images were seen as realistic in both conditions and are appealing to the viewer.

Tiggemann et al. (2019) continued scholarship about disclaimer labels, hypothesizing that showing disclaimers before an image would lessen the effect of the thin ideal. In their study, the participants were put into either realism, comparison, or control groups, in which they read newspaper articles about their assigned condition. The realism condition made women aware of the airbrushing, the comparison condition made women aware of social comparison, while the control condition talked about magazines in general terms. The participants were then given a questionnaire asking questions regarding their mood, body dissatisfaction, and their consumption of women’s magazines. After completing the questionnaire, the participants were then given a folder containing fashion magazine advertisements (with or without disclaimer labels), in which they were asked to view each one for the 40s as indicated by a timer. The participants then completed the same questionnaire that was administered before exposure to the thin ideal media...
to see how their attitudes changed. The results indicated that differences occurred due to the information condition (realism, comparison, or control), such that participants assigned to the control condition experienced the least body dissatisfaction, while participants assigned to the realism condition experienced the most. Further, disclaimer labels did not significantly affect body dissatisfaction, showing that body dissatisfaction increased regardless of warnings or manipulation. The hypothesis was not supported because while the disclaimers made the participants more aware, they did not change the severity of the body dissatisfaction associated with viewing the thin ideal.

In line with previous research, Ata et al. (2013) examined whether adding a disclaimer or warning before images of highly attractive models would affect body dissatisfaction and the intent to diet in female undergraduate students. In the study, the participants filled out a questionnaire regarding trait body dissatisfaction, internalization of media messages promoting the thin ideal, and the individual's tendency to compare their appearance to others. Then, the participants were randomly assigned to either disclaimer, warning, model control, or control conditions. The participants viewed advertisements of thin models with either a warning, disclaimer, model only, or product only (a car). They completed a Consumer Response Questionnaire after viewing each advertisement to measure the advertising effectiveness. After viewing all the advertisements, the participants completed the questionnaire from pre-exposure, as well as another survey that measured intent to diet. The results indicated a significant interaction between the time of administration and the test group. In other words, the change in body dissatisfaction differed across advertisement conditions, depending on when the questionnaire was given. Further, only the car control group reported a significant increase in
body satisfaction over time while the other groups became more bodily dissatisfied. These results can be attributed to participants viewing an advertisement without a thin model to compare themselves to. In short, disclaimers and warnings did not decrease body dissatisfaction, as this measure did not change significantly across conditions.

Thin models and advertisements are usually displayed with products that promote materialism, which is the tendency to consider material possessions more important than spiritual values. Adhikari at Dittmar (2012) studied whether materialism is linked to women’s responses to thin-ideal media. In the study, the participants were randomly assigned to one of four exposure conditions: materialism prime and thin models, materialism prime and no models, non-materialistic prime and thin models, or non-materialistic prime and no models. The materialistic condition showcased advertisements of champagne and other luxury goods, while the non-materialistic condition displayed images of landscapes and other neutral stimuli. Depending on which condition the participants were assigned to, they first viewed three sets of materialistic or non-materialistic advertisements, followed by two sets featuring either thin models or no models. Then, the participants filled out a questionnaire measuring women’s attitudes and opinions towards consumer society, appearance centrality (how central appearance is in one's life), body dissatisfaction, and materialistic values. The results showed that priming materialism significantly increased women’s body dissatisfaction after exposure to thin media models. Further, individuals in the materialistic condition reported an increase in appearance centrality. The individuals who were exposed to materialistic advertisements temporarily become self-involved and worried more about their appearance in terms of body image.
As disclaimer labels are being utilized more frequently, Frederick et al (2016) examined whether adding disclaimer labels or “subvertising” messages to thin-ideal media improves body satisfaction and decreases comparison to media images. Subvertising is when commentary is added to make the image more lighthearted and hopefully create less dissatisfaction from looking at the thin ideal. In this study, the researchers put the participants in either the subvertising or disclaimer condition, in which a thin model is displayed with either subvertising or a disclaimer label. They then used a drive for thinness scale, a social comparison scale, a physical appearance trait, and a state scale to test the effects media has on one's body image. The results revealed no differences between the conditions, showing that either option makes no difference in advertising effectiveness and the attitudes of the buyer. Disclaimer labels are helpful, but bigger changes need to be made to combat body dissatisfaction due to advertisements, which is the motivation behind the present study.

**Hypothesis**

The purpose of the present study is to understand the effects of model size and product type on advertising effectiveness and body dissatisfaction. Many studies have explored the relationship between models’ body size and advertising effectiveness in fashion media, using measures of state and body dissatisfaction (Borau and Nepomuceno, 2016; Ata et al. 2013). However, research has not yet explored the association comparing the types of advertisements and products.

The present study examined the effects of types of product (fashion or fitness), and body type of the model (thin, average, or plus-sized), on advertising effectiveness. First, I
hypothesized that among participants who viewed fashion advertisements, a skinny model would produce a positive attitude towards the product, average-sized models would produce an indifferent response, and plus-sized models would yield a negative reaction to the product. I predicted these results based on previous research that found advertisements of thin models to be more effective than those of natural models in the skincare industry due to social desirability (e.g., Borau and Bonnefon, 2017). With both fashion and skincare being about trends and beauty, the two industries tend to use similar models, and thus I would expect them to have similar results.

Second, among participants who viewed fitness advertisements, an average-sized model would produce the most effective advertisements, thin models would be moderately effective, and plus-sized models would be ineffective. Bower (2001) found that after viewing an image of a thin model, people with high levels of comparison (had high scores on measures of social comparison) reported more negative mood than people with low levels of comparison (had low scores on measures of social comparison), which correlated with a poor review of the product. This study did not explore different body types but did have a fitness aspect, as the participants viewed images of a highly-attractive model and a treadmill simultaneously. Therefore, natural models in fitness advertising could improve advertising effectiveness since they produce a less negative mood and body-related anxiety. It stands to reason because fitness involves building muscle, resulting in larger legs and arms, which would represent a natural-sized model.

Finally, I hypothesized, across all manipulations, a negative relationship between advertising effectiveness and measures of social comparison and body dissatisfaction in both
fashion and fitness advertising. Specifically, I hypothesized that high levels of social comparison and body dissatisfaction would be associated with lower advertising effectiveness. In other words, high levels of comparison and body dissatisfaction may relate to insecurity after viewing a highly attractive model, making them unlikely to find the advertisement appealing.

**Methods**

**Participants**

The participants were 194 individuals who were recruited through Amazon’s Mechanical Turk (MTurk). The sample consisted of 100 males, 91 females, one non-binary, and two individuals who did not specify gender. The mean age of the participants was 37.91 years ($SD = 11.13$; range = 21–69 years). Of these individuals, six did not use social media, 44 used for 30 mins daily, 91 used for one to two hours daily, 32 used for three to four hours daily, 16 used for five to six hours daily, and five used social media for up to eight hours.

**Procedure**

The participants first were given informed consent and took a validation measure to confirm they were not robots. After these precautions were taken, participants read a description of a clothing brand, named “Hustle”. Participants then viewed an advertisement for the product that included an image of a woman with the brand name and the slogan “Think Smart. Think Hustle”

The woman shown in the advertisement was a stock image of a model in a black top and leggings, an outfit ambiguous to a either fitness or fashion brand. Further, the model was
digitally manipulated using Adobe Photoshop to make her thin body appear either average or plus-sized (Appendix A). Additionally, the description of the brand was different for the fashion and fitness conditions. In the fashion condition, words like “fashionable” and “closet must-haves” were used, as well as mentioning fashion brands like Zara and Urban Outfitters. In the fitness condition, the description mentioned “vigorous workout” and other fitness-related brands like Athleta and Lululemon. These descriptions were used to make the product type clear to the participants (Appendix B).

After viewing the advertisement and reading the cover story, the participants answered questions to measure advertising effectiveness. The attitude towards the ad scale created by Holbrook and Batra (1987) was used, which included four questions asking “if I dislike or like the ad? I react favorably or unfavorably to the ad? I feel positive or negative towards the ad? And the ad is good or bad?” Only four questions from the full scale that consisted of 66 questions were used because most of them did not relate to the present research.

Next, the participants answered questions to measure social and physical comparison. The participants completed the Physical Appearance Comparison Scale–3 (PACS-3) which was created by Schaefer & Thompson (2018). The scale consists of 22 questions asking whether, “when I watch a movie, I compare my overall appearance to the appearance of the actors/actresses?” and similar inquiries. Some questions focused more on appearance, while others were about weight and muscularity.

Then the participants responded to questions to measure body dissatisfaction, which was evaluated using the Body Dissatisfaction scale of the Multidimensional Eating Disorder
Inventory for Anorexia Nervosa and Bulimia (Garner et al., 1983). The questionnaire was a nine-question inventory asking questions about one’s body, such as “I think my hips are too big.” These questions helped gather information regarding one’s security with their own body and how one views themselves.

Next, to measure body image, the Body Image Scale by Cash et al. (2002) was used. This questionnaire was six items long, asking questions about how attractive one feels and how one feels about their weight and appearance on a 9 point Likert scale. Finally, to get an understanding of the sample, four of the six standard demographics questions from Fontanella (2019) were administered. Specifically, the questions regarding age, gender, education, and ethnicity were administered. Once the participants completed the survey, they were debriefed and imputed their Mechanical Turk identification number to receive compensation for their involvement in the study.

Results

Advertising Effectiveness

The data were analyzed using several three-way analyses of variance (ANOVAs). The first ANOVA included advertising effectiveness as the dependent variable, and model, advertisement type, and gender as the predictors. The analysis revealed a main effect of model type (thin, average, plus-sized) on advertising effectiveness \( F(2, 191) = 9.99, p < .001, \eta^2 = .10 \). Post-hoc Tukey tests revealed that participants rated the advertisement as less effective when it included a plus-sized model \( M = 3.66, SD = .182 \) than when it included a thin model \( M \)
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= 4.56, SD = .185) or an average-sized model (M = 4.70, SD = .16). There was no difference between the thin models or the average-sized models.

There was no main effect of advertising type (fashion or fitness) on advertising effectiveness (F(1, 191) = .01, p = .95, η² = .00) such that the fashion (M = 4.31, SD = .15) and fitness conditions (M = 4.3, SD = .14) yielded equivalent ratings of advertising effectiveness.

There was no model x advertising type interaction (F(2, 191) = .02, p = .98, η² = .00), no model x gender interaction (F(2, 191) = .88, p = .42, η² = .01), and no advertising type x gender interaction (F(1, 191) = .03, p = .87, η² = .00). There was also no three-way interaction (F(2, 191) = .50, p = .61, η² = .01).

Body Image

A Pearson's r showed a significant correlation between the body image and body dissatisfaction scores (r(192) = .76, p < .001), and due to this finding, these two scales were combined because they are similar subscales that both measured one’s perception of their physical appearance. This resulted in a new dependent variable that was labeled total body image, which was analyzed using a three-way ANOVA, with model type, advertisement type, and gender as the predictors. The analysis revealed no main effect of model types (thin, average, plus-sized) on body dissatisfaction (F(2, 191) = .03, p = .98, η² = .00), such that there was no difference in body dissatisfaction between the thin ideal (M = 4.08, SD = .16) average model (M = 4.11, SD = .14), and plus-sized model (M = 4.07, SD = .15) conditions.
There was also no main effect of advertisement type (fashion vs. fitness) on body dissatisfaction \((F(1, 191) = .17, p = .68, \eta^2 = .00)\), such that there was no difference between fashion advertisements \((M = 4.12, SD = .12)\) and fitness advertisements \((M = 4.1, SD = .12)\) in terms of body dissatisfaction.

There was a main effect of gender on body dissatisfaction \((F(1, 191) = 5.53, p = .02, \eta^2 = .03)\), such that females showed higher body dissatisfaction scores \((M = 4.29, SD = .13)\) than males \((M = 3.88, SD = .12)\).

There was no model x advertising type interaction \((F(2, 191) = .02, p = .98, \eta^2 = .00)\), no model by gender interaction \((F(2, 191) = 1.0, p = .37, \eta^2 = .01)\), and no advertising type x gender interaction \((F(1, 191) = .70, p = .41, \eta^2 = .00)\). Additionally, there was no three-way interaction between model, advertisement type, and gender on body dissatisfaction \((F(2, 191) = .03, p = .97, \eta^2 = .00)\).

**Social Comparison**

A three-way ANOVA included social comparison as the dependent variable, and model, advertisement type, and gender as the predictors. The analysis revealed no main effect of model type on social comparison \((F(2, 191) = .26, p = .77, \eta^2 = .00)\), such that there was no difference between the thin ideal model \((M = 3.14, SD = .14)\), average model \((M = 3.08, SD = .13)\), and plus-sized model conditions \((M = 3.00, SD = .14)\).
There was no main effect of advertisement type on social comparison ($F(1, 191) = 2.99, p = .10, \eta^2 = .02$), in which there was no difference between fitness models ($M = 2.95, SD = .11$) and fashion models ($M = 3.21, SD = .11$).

There was no main effect of gender on social comparison ($F(1, 191) = .00, p = 1.00, \eta^2 = .00$), such that there was no difference between males ($M = 3.08, SD = .11$) and females ($M = 3.08, SD = .12$) in terms of social comparison. Furthermore, there was no model by advertising type interaction ($F(2, 191) = 1.79, p = .17, \eta^2 = .02$) and no advertisement type by gender interaction ($F(1, 191) = .78, p = .38, \eta^2 = .00$).

The data analysis did show a significant interaction between model type and gender on social comparison, ($F(2, 191) = 3.94, p = .021, \eta^2 = .04$). These results were followed up with two ANOVAs which analyzed males and females separately. The results showed no effect of model type on social comparison for males ($F(2, 100) = 1.41, p = .25, \eta^2 = .03$), but the effect of model type on social comparison approached significance for females ($F(2, 91) = 2.61, p = .08, \eta^2 = .06$).

Post-hoc Tukey tests revealed that, among females, social comparison scores were lower among participants exposed to the average model ($M = 2.78, SD = .17$) than when exposed to the thin model ($M = 3.39, SD = .21$). The plus-sized model condition ($M = 3.09, SD = .20$) yielded lower social comparison scores than the thin model condition and higher scores than the average model condition.
Additionally, there was no significant three way interaction between model type, advertisement type, and gender on social comparison ($F(2, 191) = 1.74, p = .18, \eta^2 = .02$).

**Correlation Matrix**

To examine the hypothesis that there would be a negative relationship between advertising effectiveness and measures of social comparison and body dissatisfaction in both fashion and fitness advertising, a correlation matrix was created.

The matrix showed a significant negative correlation between advertising effectiveness and body dissatisfaction ($r(192) = -.19, p = .01$), such that, across the full sample, people who reported higher levels of body satisfaction perceived the advertising as being less effective. There was no association between advertising effectiveness and social comparison ($r(192) = -.01, p = .94$).

Interestingly, there was a negative relationship between body dissatisfaction and social comparison ($r(192) = -.16, p = .03$), such that people who were more satisfied with their bodies tended to compare themselves more to others.

**Discussion**

In the clothing and fashion industries, there is a lack of diversity in the body shape of models, and image alterations are the norm (Tiggemann et al., 2019). Such beauty standards can cause insecurities, leading individuals to have a harder time coming up with positive attributes about themselves after viewing thin models (Bocage-Barthélémy et al., 2018). Furthermore, these negative emotions due to thin models have been linked to poor advertising effectiveness.
The current research investigated whether the types of product (fashion or fitness), and body type of the model (thin, average, or plus-sized), would affect advertising effectiveness.

I hypothesized that for fitness advertisements, an average-sized model would produce the most effective advertisements, thin models would be moderately effective, and plus-sized models would be ineffective. Conversely, for fashion advertisements, I hypothesized that a thin model would produce the most effective advertisements, an average-sized model would be moderately effective, and plus-sized models would be ineffective. Further, I hypothesized high levels of social comparison and body dissatisfaction after viewing a highly attractive model would cause individuals to leave a poor review of the advertisement.

Results showed no difference between fitness and fashion advertising. However, plus-sized models were less effective than thin and average models, which were equally effective. Further, women showed higher body dissatisfaction than men, and among women, the social comparison was lowest after viewing an average-sized model and was highest after viewing a thin model. Contrary to the hypothesis, more body satisfied individuals compared themselves more to the model and viewed the advertisement as less effective.

Implications

The present research suggests that advertising companies begin to take social comparison into account as it could increase their profits. Advertising companies want to maximize profit and social comparison might play a role since average-sized models reported less social comparison and equal advertising effectiveness to thin models. Since participants who viewed average-sized models reported less social comparison, advertising effectiveness may increase
due to the findings of Bower (2001), who found that negative emotion decreased advertising effectiveness. This study expanded upon the growing literature of model type, and how social comparison tends to correlate to advertising effectiveness. Prior research on the model and advertising effectiveness has primarily only explored average and thin models, not plus-sized models. Therefore, the results suggest that average models are equally effective than thin models, which was shown through the results of Tukey’s test. This is particularly noteworthy, considering the normative nature of body-dissatisfaction and comparison among young women today, especially with social media being so prevalent in our everyday lives (Austin and Sobel, 2020).

In all, these results suggest that advertising companies should aim to use average models that lower social comparison as it could maximize their profits.

Limitations

Perhaps the most notable limitation of the present research was that the hypothesized difference between fashion and fitness advertising did not emerge, which could potentially be due to the participants not noticing the manipulation. Perhaps it may have helped to retain the image of the model and the description while the questions were answered. Mechanical Turk participants and survey participants in general sometimes do not pay attention and might miss the manipulation. Keeping the image and description on the screen while completing the survey might have helped participants remember the advertisement while answering questions, making the manipulation stronger.

Additionally, there was no manipulation check to assess whether the fashion or fitness brand was remembered by participants. The manipulation check may have confirmed whether participants were aware of the conditions to which they had been assigned. Adding a
manipulation check to the study, or creating a pilot study before the experiment to measure the strength of the cover story would also increase the validity of the current study.

Another limitation of the study was the lack of a female majority in the sample. The advertisements were for female clothing, and not having a female majority might have impacted the results as the advertisements were geared towards women. While a difference was found for females, men showed no difference in most cases. To solve this problem, creating advertisements with both male and female models would allow both genders to view advertisements geared towards their demographic and would increase the statistical power and relevance of the study. Additionally, adding more females into the sample would make the advertisements more relevant as the majority of participants would be female, and they are viewing the beauty standard for their gender. Excluding men altogether is justifiable, but adding more females to the sample would be more effective to understand social comparison and advertising effectiveness.

**Directions for Future Research**

The most obvious direction is to further explore whether the null finding of advertisement type is a type two error or an accurate representation of reality. To test this, a study would need to be conducted to make sure the product-type condition was strong enough, which could be tested by asking questions regarding the manipulation. Asking specific questions regarding the advertisement to see if the participants noticed if it was fashion or fitness would allow the researchers to see if it was a type two error or a realistic representation of the fashion industry. If the participants paid more attention to the manipulation or viewed the advertisement while answering the survey, the results may have shown a significant difference between industries.
Another avenue for future research would be to assess other personality traits since more body satisfied individuals reported compared themselves more to the model, and they tended to view the advertisement as less effective. Some personality traits that could be associated with these findings are self-esteem, anxiety, and neuroticism because the less anxious and neurotic someone is, the less likely they would be to compare themselves to others. Adding these additional measures would allow us to find the answer to this unexpected finding. I suspect that Body-satisfied people would most likely measure high in self-esteem, anxiety, and neuroticism since they are comparing themselves to others, which may correlate to a poor review of the product. These predictions are based on prior research from Bower (2001) who said negative emotions lead to a poor product review.

Another avenue for future research could be adding more industries like skincare, haircare, and other typically advertised products. Adding in these brands would make the study more robust and add on to the current findings that natural models produce the least amount of body dissatisfaction and social comparison. Comparing across industries would most likely produce different results. It was expected that in the fashion and beauty industries, thin and average models would be more effective, but in commercial products, average models might be more effective due to less emphasis on beauty standards and more focus on the product itself. These predictions are based on Ata et al. (2013), who found that when there was no model in the picture, body satisfaction increased due to there not being a thin model to compare themselves to.

Conclusion
There is a wealth of research demonstrating that people high in social comparison and body dissatisfaction feel an increased negative mood after viewing an advertisement containing a thin model. The current research added to the existing literature by demonstrating that plus-sized models were less effective than thin and average models. Additionally, the extent to which participants reported comparing themselves to others was lowest after viewing an average-sized model. These findings thus suggest that social comparison is important to note when evaluating advertising effectiveness; it also provides potential avenues for increased engagement and profitability for advertisers. In all, while it is remarkable that companies are utilizing plus-sized models, the current research suggests that such advertisements are less effective than those featuring thin or average-sized models.
References


Appendix A

Thin Ideal

Average

Plus-Sized
Appendix B

Fitness:

On the next screen, you will view an advertisement for an athletic clothing brand that is currently popular in New Zealand. This advertisement has been shown on billboards for several months in the Auckland metropolitan region. After you view the advertisement you will be asked some questions about it.

Remember, this is a company that sells workout and athleisure clothing. Like Lululemon and Athleta, they sell items, such as dry-fit shirts, shorts, and other items perfect for everyday activities and strenuous workouts.

Fashion:

On the next screen, you will view an advertisement for a fashionable clothing brand that is currently popular in New Zealand. This advertisement has been shown on billboards for several months in the Auckland metropolitan region. After you view the advertisement you’ll be asked some questions about it.

Remember, this is a company that sells fashionable clothing, perfect for keeping up with the current trends. Like Urban Outfitters and Anthropologie, they sell items such as jeans, sweaters, dresses, basic tees, and other items that are closet must-haves.
Tables and Figures

<table>
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<th></th>
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<th>Average</th>
<th>Plus-sized</th>
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<td>4.72 (a)</td>
<td>3.69 (b)</td>
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<td>(.18)</td>
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<td>4.05 (a)</td>
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<td>(.12)</td>
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*Table 1*: Mean total advertising effectiveness, body image, and social comparison across the three model types. If a letter is shared across rows they do not significantly, and if the letters are different the conditions significantly differ.

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</table>

*Table 2*: Mean total advertising effectiveness, body image, and social comparison across the two advertising conditions. If a letter is shared across rows they do not significantly, and if the letters are different the conditions significantly differ.
Figure 1: Mean advertising effectiveness scores for the thin, average, and plus-sized conditions across fashion and fitness advertising.

Figure 2: Mean female body image scores for the thin, average, and plus-sized conditions across fashion and fitness advertising.
Figure 3: Mean male body image scores for the thin, average, and plus-sized conditions across fashion and fitness advertising.

Figure 4: Mean male body social comparison scores for the thin, average, and plus-sized conditions across fashion and fitness advertising.
Figure 5: Mean female body social comparison scores for the thin, average, and plus-sized conditions across fashion and fitness advertising.