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

Natalie Lieberson

Psychology Department

Introduction

- 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.
- **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.**

Literature Review (Body Image and the Thin Ideal)

Dittmar and Howard (2004)

- Investigated why women experience negative moods when looking at models exhibiting the thin ideal.
  - Participants were women who worked as teachers or in the fashion industry who viewed ostensible advertisements for perfumes.
  - Viewed thin, natural, or no model
  - Assessed their level of ideal body internalization, the extent to which they perceived the advertising as effective, and their degree of body-focused anxiety
- 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.

Borau and Bonnefon (2017)

- Explored why natural models decrease body anxiety, but also trigger negative effects akin to disgust.
  - Skin care industry (oil or cream) and either thin or natural models.
  - Viewed the ads then were asked questions about body anxiety, attitude toward the product, and their own bodies
- 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
  - 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".

Literature Review (Body Image and the Thin Ideal)

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.
    - looked at advertisements that featured a product with either a thin model or no model.
    - Answered a State Mood and Body Dissatisfaction scale before and after viewing the advertisements.
    - Social comparison condition (questions asking comparison to model), Fantasy (questions on models life), or control (no more 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
- Individuals in the fantasy and control conditions experienced a more positive mood than those in the social comparison condition.

Literature Review (Social Comparison)

Bocage-Barthélémy et al. (2018)

- Studied the thin ideal to determine whether social comparison is an automatic or controlled process.
  - Measured body dissatisfaction before Ad
  - High or low cognitive load condition
  - Viewed a beauty Ad with or without a thin model
  - 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 control condition.

Borau and Nepomuceno (2016) *Study 1*

- Studied airbrushed advertisements to see whether disclaimer labels decrease one's level of social comparison.
  - Viewed Ads of thin models, then picked six and explained how it made them feel
- Found 4 sub-groups:
  - Resistants Defensive and criticize the thin ideal; they have negative emotions toward the thin models, finding them unrealistic.
  - Indifferent: Detached and have little to no emotion towards the model.
  - Hedonist: Naive to the idea of the thin ideal; they dream and feel delighted from the fantasy.
  - Victims: Know the image is not real yet continue to compare themselves anyway, and therefore are fascinated and have mixed emotions after viewing thin models.

Literature Review (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.
    - Viewed a thin or model airbrushed to be a natural size
    - Measured Body Dissatisfaction, desire for thinness, and tendency to compare themselves to the models
    - Lexical decision task: Say if a word was a word or not, some connoted self-love (to love) and others were control (to walk)
- The results demonstrated that individuals who were exposed to thin models had a longer response time when forming self-liking verbs and reported comparing themselves more to the models than did participants in the natural model condition.

Bower (2001)

- Hypothesized that a negative mood would correlate with a poor review of a product.
    - Participants looked at images of a highly attractive model and a treadmill.
    - Completed a Likert scale questionnaire to measure the extent to which they compared themselves with the model, negative mood, and advertising effectiveness
        - Labeled as high or low comparers
- The results demonstrated that comparers had a more negative mood than non-comparers after looking at the advertisement.
    - 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.

Literature Review (Disclaimer Labels)

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.
  - Viewed a thin model that was promoting firming cream with or without a disclaimer label
  - questions regarding how the participants felt about themselves after viewing the images, if airbrushing was detected, and their attitude towards the advertisement.
- 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.
  - The disclaimers did not significantly affect participants' emotional reactions or attitudes toward the advertisements.

Tiggemann et al. (2019)

- Hypothesized that showing disclaimers before an image would lessen the effect of the thin ideal.
  - Participants were put into either realism (aware of airbrushing), comparison (compare to model), or control groups, and read newspaper articles about their assigned condition.
  - Viewed ads for the 40s as indicated by a timer
  - given a questionnaire asking questions regarding their mood, body dissatisfaction, and their consumption of women's magazines before and after the questionnaire
- Differences occurred due to the information condition (realism, comparison, or control), where the control condition experienced the least body dissatisfaction and the realism condition experienced the most.
- Disclaimer labels did not significantly affect body dissatisfaction

Literature Review (Disclaimer Labels)

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.
  - Participants in either the subvertising or disclaimer condition, in which a thin model is displayed with either subvertising or a disclaimer label.
  - 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.

Adhikari at Dittmar (2012)

- Studied whether materialism is linked to women's responses to thin-ideal media.
  - 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.
    - Materialism was luxury products and non-materialism was neutral
  - Measured women's attitudes and opinions towards consumer society, appearance centrality (how central appearance is in one's life), body dissatisfaction, and materialistic values
- Priming materialism significantly increased women's body dissatisfaction after exposure to thin media models, and increased appearance centrality

Literature Review (Disclaimer Labels)

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.
    - 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.
    - Randomly assigned to either disclaimer, warning, model control, or control conditions.
        - Viewed advertisements of thin models with either a warning, disclaimer, model only, or product only (a car).
    - Completed a Consumer Response Questionnaire after viewing each advertisement to measure the advertising effectiveness and completed the questionnaires from pre-exposure, as well as another survey that measured intent to diet.
- The change in body dissatisfaction differed across advertisement conditions, depending on when the questionnaire was given.
    - Only the car control group reported a significant increase in body satisfaction over time while the other groups became more bodily dissatisfied.

Hypothesis

- **H1:** Among participants who viewed fashion advertisements, a skinny model would produce the most effective advertisements, average-sized models would produce an indifferent response, and plus-sized models would yield a negative reaction to the product.
- **H2:** Among participants who viewed fitness advertisements, an average-sized model would produce the most effective advertisements, thin models would produce an indifferent response, and plus-sized models yield a negative reaction to the product.
- **H3:** Across all manipulations, a negative relationship will exist between advertising effectiveness and measures of social comparison and body dissatisfaction in both fashion and fitness advertising.
    - In other words, participants who are high in social comparison and body dissatisfaction are more likely to feel insecure after viewing the thin model, finding the advertisement less appealing.

Methods

- 194 individuals who were recruited through Amazon's Mechanical Turk (MTurk).
  - 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.
- Given informed consent and took a validation measure to confirm they were not robots.
- 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 model was digitally manipulated using Adobe Photoshop to make her thin body appear either average or plus-sized. Additionally, the description of the brand was different for the fashion and fitness conditions.

Advertisements and Descriptions

Thin Ideal

Average

Plus-Sized

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.

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.

Methods (Continued)

- Measured 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?"
- Measured social and physical comparison using 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.
- 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).
  - A nine-question inventory asking questions about one's body, such as "I think my hips are too big."

Methods (Continued)

- 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.
- 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 their financial compensation.

Results (Advertising Effectiveness)

- 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 ($M = 3.66$, $SD = .18$) than when it included a thin model ($M = 4.56$, $SD = .19$) 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 n**o main effect o**f:
  - Advertising type (fashion or fitness) on advertising effectiveness
  - Model x advertising type interaction
  - Model x gender interaction
  - Advertising type x gender interaction
  - Three-way interaction ($F(2, 191) = .50$, $p = .61$, $\eta^2 = .01$).

Results (Body Image)

- The analysis revealed **no main effect of**:
  - Model types (thin, average, plus-sized) on body dissatisfaction,
  - Advertisement type (fashion vs. fitness) on body dissatisfaction
  - Model x advertising type interaction
  - Model by gender interaction
  - Advertising type x gender interaction.
  - Three-way interaction between model, advertisement type, and gender on body dissatisfaction
- **There was a main effect of** gender on body dissatisfaction ($F(1, 191) = 5.53$, $p = .02$, $\eta\square^2 = .03$), such that females showed higher body dissatisfaction scores ($M = 4.29$, $SD = .13$) than males ($M = 3.88$, $SD = .12$).

Results (Social Comparison)

- The analysis revealed **no main effect of**:
  - Model types (thin, average, plus-sized) on social comparison
  - Advertisement type (fashion vs. fitness) on social comparison
  - Gender on social comparison
  - Three-way interaction between model, advertisement type, and gender on body dissatisfaction
- The data analysis **did show a significant interaction** between model type and gender on social comparison, (F(2, 191) = 3.94, p = .021, η^2 = .04).
  - Followed up with two ANOVAs which analyzed males and females separately.
    - The results showed no effect of model type on social comparison for males, but the effect of model type on social comparison approached significance for females (F(2, 91) = 2.61, p = .08, η^2 = .06).
      - 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.

Tables

	Thin	Average	Plus-sized
Advertising Effectiveness	4.55 (a) (.18)	4.72 (a) (.16)	3.69 (b) (.18)
Body Image	4.06 (a) (.15)	4.11 (a) (.14)	4.05 (a) (.15)
Social Comparison	3.07 (a) (.14)	3.095 (a) (.12)	3.03 (a) (.14)

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.

	Fashion	Fitness
Advertising Effectiveness	4.30 (a) (.14)	4.34 (a) (.14)
Body Image	4.14 (a) (.12)	4.01 (a) (.12)
Social Comparison	3.20 (a) (.11)	2.93 (a) (.11)

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.

Correlation Matrix

- The matrix showed a negative correlation between advertising effectiveness and body dissatisfaction ($r(192) = -.19$, $p = .01$)
    - 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 ($r(192) = -.01$, $p = .94$).
- There was a negative relationship between body dissatisfaction and social comparison ($r(192) = -.16$, $p = .03$)
    - people who were more satisfied with their bodies tended to compare themselves more to others.

Discussion

- **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.**
- 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.**
- Women showed **higher** body dissatisfaction than men
  - Contrary to the hypothesis, more body satisfied individuals compared themselves more to the model and viewed the advertisement as less effective.
- Social comparison was **lowest** after viewing an average-sized model and was **highest** after viewing a thin model.

Implications:

- The present research suggests that advertising companies want to maximize profit, and social comparison might play a role because our results found that people who viewed average-sized models reported less social comparison and equal advertising effectiveness to thin models.

Limitations

1. The hypothesized difference between fashion and fitness advertising did not emerge, which could potentially be due to the participants not noticing the manipulation.
    a. 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.
2. There was no manipulation check to assess whether the fashion or fitness brand was remembered by participants.
    a. 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.
3. Lack of a female majority in the sample
    a. A difference was found for females, men showed no difference in most cases.
    b. 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.
    c. 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.

Directions for Future Research

1. Explore whether the null finding of advertisement type is a type two error or an accurate representation of reality.
   a. 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.
2. Assess other personality traits
   a. more body satisfied individuals reported compared themselves more to the model, and they tended to view the advertisement as less effective.
   b. 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.
      i. These predictions are based on prior research from Bower (2001) who said negative emotions lead to a poor product review.
3. Adding more industries like skincare, haircare, and other typically advertised products.
   a. 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.
      i. 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

- The current research added to the existing literature by demonstrating that plus-sized models were less effective than thin and average models.
- Found that 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.