THE EFFECT OF ENDORSER BODY TYPE ON FEMALE CONSUMERS’ ATTITUDES AND EMOTIONAL RESPONSES TOWARD WEIGHT LOSS ADVERTISEMENTS

By

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THE EFFECT OF ENDORSER BODY TYPE ON FEMALE CONSUMERS’ ATTITUDES AND EMOTIONAL RESPONSES TOWARD WEIGHT LOSS ADVERTISEMENTS

By

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Weight loss advertisements are notorious for their use of deceptive claims and extremely thin, unattainable models. Despite research that shows using extremely thin models creates negative body image issues among women, advertisers continue using models with unrealistic body types, assuming that thinness sells. The purpose of the current study is to investigate whether using a realistic, average-sized model can be more effective at selling a product than using a thin model.

The current study explores how the body type of an endorser in a weight loss advertisement affects a female consumer’s attitude toward the ad, attitude toward the brand, purchase intentions, and emotional responses toward the ad. Women between 18 and 35 years old were exposed to a weight loss advertisement with one of three endorser conditions—mediated (thin) body type endorser, a realistic body type endorser, and no endorser. When analyzing the results, factors that may have influenced the results were controlled, including participant race, BMI, body esteem, perceived physical fitness, and dieting intentions. The results showed there were no significant differences between the three types of endorsers, implying that using a realistic endorser is just as effective as using a thin endorser.
CHAPTER 1
INTRODUCTION

Over the last 50 years, the body size for female models used in weight loss ads has remained remarkably thin, and negative attitudes toward weight loss ads have persisted (Jung and Bie, 2014). In fact, many feel weight loss advertisements are deceptive because of the models they use (Jung and Bie, 2014). The average American woman has a BMI of 26.5 (Firger, 2016) and a WHtR (waist-to-height ratio) of .58 (Fratello, 2016), while models in the media have an average BMI of 16 (Firger, 2016) and a WHtR of .34 (Jonah, 2013), which are considered below normal, healthy weight. Although the U.S. has an obesity epidemic, the mediated ideal is unnatural and unattainable by most American women. Thus, the average American woman cannot attain the "results vary" image many weight loss ads present, creating feelings of deception among consumers as well as increasing body dissatisfaction (Jung and Bie, 2014; Homan et al., 2012).

Indeed, exposure to unrealistic models in the media, which include diet ads, produce negative effects and unrealistic expectations in women (Halliwell & Dittmar, 2004). Despite consensus that exposure to thin models in media is associated with poor body image and disordered eating, there have been few attempts to enact change in the media, partly because marketers blindly believe that what has been done in the past is the best way to sell a product without testing other ways of selling their product (Anschutz, Engels, Becker, & van Strien, 2008; Grabe, Ward, & Hyde, 2008; Halliwell & Dittmar, 2004). For example, there is an assumption in the industry that drastic weight loss paired with an unrealistically thin model sells weight-loss products. However, social comparison theory states that people tend to compare themselves to like others.
(Festinger, 1954). The theory suggests that if mediated models were more similar in body size to women in the general population, exposure to mediated images might not result in negative body image (Diedrichs & Lee, 2011). Thus, it is possible that a more realistic looking model (i.e., a model who has a healthy BMI and waist-to-height ratio) will produce more positive comparisons and potentially work better to sell the product because the model is more relatable and attainable. The realistic model may also create more positive emotional responses, and positive emotions generally elicit more positive reactions towards advertisements and purchase intentions (Holbrook & Batra, 1987).

Therefore, this study examines two endorser body types in a weight loss ad: an endorser with the media’s ideal body type and an endorser with a realistic, healthy body type. Both endorsers will be women because the majority of weight loss ads target women, and women are much more likely to use weight loss products than men (e.g., Blanck et al., 2007). Additionally, the weight loss advertisement will feature a scientifically-backed weight loss meal plan rather than an unrealistic weight loss “miracle cure” product. Using a scientifically-backed meal plan is important because it will give the product credibility and likely remove feelings of deception (Lellis, 2016). Thus, the researcher will measure how endorser body type affects attitude toward the ad, attitude toward the brand, purchase intention, and emotional responses to these science-based weight loss ads. The overarching research question for the study is: How does endorser body type affect female consumer attitudes and emotional responses toward weight loss advertisements?
**Importance of the Study**

This study is important for several reasons. First, it will add to the existing research on how an endorser’s body type affects an advertised product. Current research on the subject has a variety of empirical results. Several studies show that using average size models in advertising is just as effective as using thin models (Halliwell & Dittmar, 2004; Diedrichs & Lee, 2011). Other research shows that the attitude toward an ad may depend on the product category and a participant’s level of involvement in the product category (Janssen, Paas, & Lett, 2014). One study that used only plus-size female participants showed that using plus-size models to endorse a clothing brand can create positive or negative feelings, depending on the participant’s belief that she can control her weight (Cinelli & Yang, 2016).

Along with adding to the current conversation regarding the effect of endorser body type on an advertised product, the present study will focus on the weight loss product/service category. No one to date has researched endorser body type in weight loss advertisements. Research that explores the effects of endorser body type on an advertised product often focuses on apparel or fashion (Janssen, Paas, & Lett, 2014; Cinelli & Yang, 2016) because the fashion and beauty industry influence women’s appearance in society. The present study focuses on weight loss ads because ads in this category represent how women’s bodies should look based on society’s standards.

Besides attitude toward the ad and brand as well as purchase intention, the current study will investigate emotional response. No one to date has looked at the emotional response women have toward body types in weight loss advertising. Measuring emotional response is essential because “emotions can have a direct
influence on behavior that is not captured or summed up by attitude judgments” (Allen, Machleit & Kleine, 1992). Studies show that affect (emotional response) is a better predictor of behavioral intentions than cognition (learned cues). Emotional responses may also last longer in memory than the cognitive responses (Goodman, Morris, & Sutherland, 2008). Thus, emotional response will help researchers better understand how images influence attitudes.

This study is also important regarding the weight loss advertising industry. The weight loss industry proves itself to be a substantial market both economically and socially. American interest in losing weight resembles a “modern-day search for the Holy Grail” (Gross, 2006), and in 2014, the U.S. weight loss industry was a $64 billion market. As of November 2016, 60% of women in the United States wanted to lose weight, and the industry has taken advantage of this trend, with 85% of weight loss products and services directed to a female audience. Therefore, the results of the study can guide best practices when advertising weight-loss products to women. The results will give insight into which endorser body-type female consumers prefer – mediated body type or realistic body type – and the study will expand on the knowledge of women’s emotional responses toward weight-loss advertisements.

**Overview of the Thesis**

Therefore, to answer the overarching research question, this thesis proceeds in the following manner. In Chapter 2, the researcher will review the existing literature in the area of weight loss advertising, ideal beauty and body image issues, endorsers used in advertising, emotional responses toward ads, and theoretical support. In Chapter 3, the researcher will go through the methodology for the present study,
including the method rationale, variable descriptions, stimulus creation, and the procedure. In Chapter 4, the researcher will share and analyze the results of the study. Finally, Chapter 5 will discuss the results, including theoretical and practical implications of the results, limitations of the study, and future research.
CHAPTER 2
LITERATURE REVIEW

This chapter explores the previous research in the areas of the weight loss industry and weight loss advertisements, ideal beauty in the United States, body image and body dissatisfaction issues among women, and the effects of model body size in advertisements. The review on the weight loss industry describes the industry’s history and why it continues to grow. This growth has contributed to the increase in weight loss advertisements. Reviewing weight loss advertisements is important to the study because they show which products are being advertised, the persuasion strategies being used, and the types of models that are featured in the ads. The review of ideal beauty in the United States sets up the beauty expectations of women, which is unattainable for most American women. Due to the unrealistic beauty standards, women often have body image issues and body dissatisfaction, which is also discussed in this chapter. Finally, research on the effects of model body size in advertisements is discussed. After reviewing the current research, the chapter discusses the present study’s theoretical framework, the hypotheses, and the need for the research.

Weight Loss Industry and Weight Loss Advertising

Consumers have been trying to find an effective way to lose weight since at least 1900 (Gross, 2006). Since this time, a multitude of weight loss products have gained and lost popularity, including diet bath powders, soaps, and diet pill appetite suppressants. The earliest weight loss drugs included animal-derived thyroid, laxatives, and arsenic. These products were eventually proven to be a temporary and unsafe method of losing weight. Today, the present-day diet industry includes more weight loss products and services (i.e. foods, pills, powders, cream, gels, patches, programs) than
ever before. The U.S weight loss market revenue was $60.9 billion in 2010, $64 billion in 2014, and $66 billion in 2016 (MarketData, 2011, PR NewsWire, 2017). It is expected to grow 2.8% in 2017 (WebWire, 2017).

Part of the reason why weight loss products and advertisements have become so common is the obesity epidemic in the United States. In 2001, the Surgeon General of the United States called for ways to stop the obesity epidemic in the U.S. and put out a call to action to decrease and prevent obesity in the United States (Mishra & Kern, 2015). Since this call to action, the Centers for Disease Control and Prevention (CDC) and other organizations put an increased focus on weight reduction. This focus led marketers to capitalize on the obesity problem. With 36% of U.S. adults being obese, weight loss companies have a large target market to cater. Some of the most prominent weight loss programs like Weight Watchers and Nutrisystem spend hundreds of millions of dollars on advertising and celebrity endorsements a year (Mishra & Kern, 2015).

Despite the economic success of the weight loss market, the industry is drenched in fraudulent claims. Weight loss products constitute the highest percentage of fraudulent claims filed with the Federal Trade Commission with 7.6 million incidents of fraud in 2011 (Anderson, 2013). The second highest was fraudulent prize promotions with 2.9 million incidents, and the third highest was fraudulent work-at-home programs with 2.8 million incidents.

When the FTC did an analysis of weight loss advertisements in magazines, television, and newspapers, 40% of the ads included claims that were false or misleading (Ethan et al., 2016). To try and mitigate this problem, the FTC has created regulations for weight loss advertisements, including specific claims that cannot be used
(e.g. “weight loss of two pounds or more a week for a month or more without dieting or exercise”; “causes permanent weight loss even after the consumer stops using the products”) (FTC, 2014). While the FTC makes an effort to discourage deceptive advertising, the organization’s actions are merely a “slap on the wrist” (Gross, 2016, pg. 349). Because weight loss advertising has a fair level of protection from the First Amendment under the “commercial speech” status, it takes considerable time and effort researching claims to determine if they are deceptive. By the time an advertisement is banned, millions of consumers may have already seen the fraudulent weight-loss claim (Gross, 2006).

Advertising helps shape society by acting as a source of information, including health information (Mishra and Kern, 2015). Advertising plays a role in informing and persuading the public about weight issues, and because weight loss advertisements are often deceptive, it is important to understand the content of weight loss advertisements to better understand the messages the public receives. To begin with, many researchers have performed content analyses on weight loss advertisements to better understand the types of models in the ads, persuasion strategies used, and products being advertised. For example, Mishra and Kern (2015) analyzed a decade (2001-2011) of weight loss advertisements across 10 magazines that reach people of different sexes, races/ethnicities, and sexual orientations. The results showed the most common model is a white/Caucasian woman, with very little representation of Black and Hispanic people. The men in weight loss ads are shown in an active state (e.g. exercising), while women were found to be in a passive state (e.g. just posing). The content analysis
showed that weight loss advertisers reinforce dominant social ideals of beauty and body to all different groups of gender, race, and sexual orientations.

Jung and Bie (2014) did a content analysis of weight loss advertisements in *Vogue* from 1960 to 2009 looking at body size and themes in ads. The analysis showed that the models’ body weight has increased for both male and female models. Male body size significantly increased from 2.25 (1960s) to 5.0 (2000s) on a 9-point weight contour drawing rating scale (1=skinniest, 9=largest), while female body weight also increased, but not significantly, from 2.27 to 2.44 on the same scale. Thus, women remained remarkably thin over 50 years, but men gained significant weight. In terms of the weight loss themes in ads, “weight loss without diet or exercise” and “inducement” were the most popular weight loss claims in the 1960s. The most popular in the 1980s were “scientifically proven” and “safe or natural”, and in the 2000s they were “rapid weight loss” and “scientifically proven”.

Similarly, Ethan et al. (2016) analyzed weight loss articles and advertisements in women’s health and fitness magazines (*Fitness, Health, Self, Shape*, and *Women’s Health*) to better understand themes and appeals as well as product sub-categories. A total of 31 issues from March to September 2013 were analyzed. The analysis showed the most common category of advertisements was weight loss pills (46% of the 87 weight loss advertisements analyzed). This was followed by fat burners (15%) and hunger reduction strategies (10%). The most commonly identified theme of the ads was “obtaining a sense of achievement” (27%), followed by “before and after weight loss” (21%). Only a small percent of the ads emphasized happiness (9%) or natural weight loss (9%). These findings show that diet pills are the most commonly advertised product
(in these specific magazines), and these types of ads often suggest that weight loss can happen quickly (Ethan et al., 2016). The CDC recommends losing weight gradually because you will be more likely to maintain the weight loss. The most popular themes ("sense of achievement" and "before and after") relate to appearance-based motivations, which can cause negative effects on women’s weight loss perceptions and behaviors. These types of ads are also misleading and promote unrealistic results (Ethan et al., 2016).

In fact, the weight loss industry has a long history of useless or dangerous products rising in and out of popularity and using deceptive and misleading claims to advertise these products. Despite regulations from the FTC, false claims are still prevalent. The content analyses of weight loss advertisements show the typical advertisement includes an attractive, very thin Caucasian female, who is posing in a passive stance. The popular themes in the ads include “rapid weight loss”, “scientifically proven”, and “before and after”, which shows that advertisers are pushing the idea of losing weight quickly (which is not recommended by the CDC) through “scientifically-backed” claims (which may actually be deceptive claims), and showing the results of the product in the “before and after” pictures (which typically show unrealistic results).

**Thin Ideal in Mass Media**

Given the typical model in weight loss advertising, this next section explores the thin ideal in mass media and advertising. Thin is beautiful, according to the media. As Kate Moss famously said, “Nothing tastes as good as skinny feels.” Being thin is a desirable physical trait for women, and it is associated with discipline, fitness, attractiveness, youth, and happiness (Polivy & Herman, 2004). The images of thin
models are omnipresent in mass media – especially advertisements – but these bodies do not exist in reality, with only 5% of women being able to attain the bodies portrayed in advertising (Polivy & Herman, 2004).

While ideal female beauty varies over time and across cultures, in present-day Western cultures, female beauty is described as “the physically impossible, tall, thin and busty Barbie-doll stereotype” (Marchessault, 2000, p. 204). The media – magazines, television, movies, etc. – is a tool for the widespread communication that thinness is ideal. Ultra-slim models, actresses, and other media figures, and the near absence of heavier women in media, send the message to Western women that they must be thin to be attractive, desirable, and successful (Polivy & Herman, 2004).

Research shows that women typically rate the ideal body size as a body smaller than their own (MacNeill & Best, 2015; Crossley, Cornelissen, and Tovee, 2012; Demarest & Allen, 2000). MacNeill and Best (2015) did a study with female undergraduate students that examined the correlation between body image satisfaction and perception of the female body. To do so, the participants were given a copy of the Photographic Figure Rating Scale (PFRS), which contains 10 photographs of women facing forward. The images range in BMI from 12.5 to 41.2, with two photos from each of the five established BMI categories: emaciated (<15), underweight (15-18.5), normal (18.5-24.9), overweight (25-29.9), and obese (>30). Participants rated each of the pictures from 1 to 10 (1 being emaciated, 10 being extremely obese), then they identified their ideal body and the body that most accurately resembled their own. The results showed the most common ideal female body had an underweight BMI, and overall, the participants rated the ideal body as a body smaller than their current size.
Similarly, Crossley, Cornelissen, and Tovee (2012) did a study with a 3D interactive software system where participants produced photorealistic, virtual bodies of their own ideal size and body shape and the size and shape of their ideal partner. The body mass index (BMI), waist-to-hip ratio (WHR) and waist-to-chest ratio (WCR) of the ideal bodies were measured. The ideal female body created by female participants (BMI=18.9, WHR=.70, and WCR=.67) was very similar to the ideal female body created by male participants (BMI=18.8, WHR=.73, and WCR=.69). The BMI of the ideal female body created by men (18.8) and women (18.9) was close to being underweight (a BMI under 18.5 is considered underweight for women). Both male and female participants also created an ideal body that was significantly different from their own. Female participants’ ideal body was significantly smaller than their current body type while men’s ideal was larger than their current size.

Others have looked at ideal body from the perspective of gender and ethnicity differences. Demarest and Allen (2000) did a study with 120 African American, Hispanic, and Caucasian college students, and there were 20 men and 20 women from each ethnic group. The participants rated their body on a scale of nine figure drawings, then they rated the body they would like to resemble (ideal bodies). The women in the study perceived their current figures as heavier than their ideal, while men were generally satisfied with their own body shapes. There were no significant findings regarding ethnicity and body dissatisfaction (the difference between current body and ideal body) for the women, which shows that women of different ethnicities – African American, Hispanic, and Caucasian – all experience body dissatisfaction.
The results of these studies show that women’s ideal body is significantly smaller than their own and borders on having an “underweight” BMI. The preferences for the ideal female body are generally similar between both men and women. They both prefer a low BMI and a relatively curvaceous body. Researchers suggest that culture-specific female ideal body size and shape can have a strong influence on women’s concept of what they should aspire to look like. This ideal body, which is unattainable for most women, can lead to body dissatisfaction and even eating disorders (Crossley, Cornelissen, and Tovee, 2012).

**Body Image, Body Dissatisfaction, and Dieting Behaviors**

**Body Image**

Because exposure to ideal media models contributes to body dissatisfaction and dieting behaviors (Crossley, Cornelissen, and Tovee, 2012) and weight loss ads target both genders, it is important to look at these relationships and body image as a whole and compare them between men and women. Regarding body image, women’s affective concerns about shape and weight is one of the most robust gender differences in body-related thoughts and activities (e.g. food imagery, dieting, eating disorders) (Demarest & Allen, 2000). Men are less disturbed by being fat, and studies regarding body-shape perception show men typically have a more positive body image than women do, regardless of their weight (Demarest & Allen, 2000).

There is an abundance of research that supports the notion of gender differences in body image (Demarest & Allen, 2000; Lowery et al., 2005; Feingold & Mazzella, 1998). Demarest and Allen’s study (2000) showed that women of different ethnicities (African-American, Hispanic, and Caucasian) experienced more body image issues
than their male counterparts, signifying that negative body image affects women of different ethnicities much more than men. Lowery et al. (2005), examined the relationship among self-esteem, body image and health-related behaviors, and found that women had lower self-esteem, and when both men and women were consistent exercisers, the women had poorer body image.

Feingold and Mazzella (1998) did a meta-analysis of gender differences in attractiveness and body image, examining 222 studies over 50 years. The overall findings show that men are much more satisfied with their bodies than women, and to a lesser degree, men consider themselves to be better looking than do women. The meta-analysis has evidence that over the past 50 years, women’s body satisfaction has decreased, while men’s body satisfaction has increased.

**Body Dissatisfaction and Dieting Behaviors**

In Western society, the thin-ideal of women largely contributes to the high levels of disordered eating and body image disturbance in the female population. Research shows that women are more influenced by appearance pressures and experience more body dissatisfaction than men (MacNeill & Best, 2015). The female “thin-ideal” is a major contributor to the growing issues of body image dissatisfaction and disordered eating attitudes and behaviors (MacNeill & Best, 2015).

As previously mentioned, MacNeill and Best (2015) did a study that measured female body dissatisfaction, using the Photographic Figure Rating Scale (PFRS). To calculate body dissatisfaction, they took the difference between the numerical rating score of participant body size and the numerical rating score of participant’s ideal body size. About 70% of participants had body dissatisfaction (their ideal body was a body
smaller than their own). In the study, body dissatisfaction was significantly correlated with the Eating Attitudes Test-26 (EAT-26) and the Attention to Body Shape Scale (ABS). The EAT-26 scale measures atypical behaviors and attitudes about eating, and the ABS scale measures the degree of body focus. The results show that the majority of women in the study experienced body dissatisfaction, and higher body dissatisfaction is positively correlated with higher levels of atypical behaviors and attitudes about eating and a higher degree of body focus.

While MacNeill and Best’s study is one of the more recent studies on body dissatisfaction and its connection with eating disorder attitudes and behaviors, Grabe, Ward, and Hyde (2008) did a meta-analysis on the role of the media in body image concerns among women. The authors examined 77 studies that tested the links between media exposure and women’s body dissatisfaction, internalization of the thin ideal, and eating behaviors and beliefs. The findings support the notion that exposure to media images depicting the thin-ideal body is linked to women’s body dissatisfaction and disordered eating behavior.

Moreover, research shows that body image dissatisfaction is a common precursor to disordered eating behavior and eating disorders (MacNeill & Best, 2015). Anorexia nervosa and bulimia nervosa differ in their diagnostic criteria, but they are both characterized by abnormal eating behaviors, weight regulation, and distorted attitudes and perceptions about body weight and shape. Both disorders are based on a fear of gaining weight, and the majority (about 90%) of patients who suffer from the diseases are female (MacNeill & Best, 2015).
Given the research on body image, it seems society’s glorification of slimness and resentment toward fatness contributes to young women becoming dissatisfied with their weight and shape (Polivy & Herman, 2004). Body image issues strongly skew female because women are more frequently portrayed as unrealistically thin in the media than men, there are more societal pressures on women to be thin, and these images create negative body images and body dissatisfaction, which can lead to eating disorders (MacNeill & Best, 2015). Researchers (Halliwell & Dittmar, 2004; Diedrichs & Lee, 2011) suggest that increasing the body size diversity in the media is an important step toward promoting positive body image.

**Effects of Model Body Size in Advertisements**

Although research shows the relationship between exposure to thin models and negative body image, there is also an assumption in advertising that images with thin models sell the product better. It is assumed that “thinness” sells, whereas “fatness” does not (Halliwell & Dittmar, 2004). According to a spokesperson from the modeling agency that represents top models Naomi Campbell and Claudia Schiffer, “Statistics have repeatedly shown that if you stick a beautiful skinny girl on the cover of a magazine, you sell more copies... At the end of the day, it is a business and the fact is that these models sell the products” (Gillian, 2000). The effectiveness argument is the main defense for using thin models in advertising, but numerous studies show that this is not the case. Many studies show that the use of thin models in advertising creates negative feelings, including body anxiety and body dissatisfaction, which leads to negative attitudes toward the ad and lower purchase intentions.
Even though attractive models increase attitude toward the ad and purchase intentions (Till & Busler, 2000), when attractiveness is constant, thin models do not always produce positive results (Halliwell & Dittmar, 2004; Anderson & Paas 2014; Sohn & Youn, 2013). Thus, Anderson & Paas (2014) investigated “the dark sides” of using extremely thin models and their negative influences on consumers. The researchers found that extremely thin models were viewed as less attractive and produced less positive attitudes toward the ad and lower purchase intentions. Participants had negative affect toward ads with the extremely thin models and had low ethical judgements of the ads, resulting in less positive attitudes toward the ad.

Sohn and Youn (2013) did a study that tested the attitude toward the ad, attitude toward the brand, and purchase intentions of three female model body size conditions – thin, average, and large – while controlling for body mass index, facial attractiveness, and social comparison. Participants were exposed to one of the three conditions, and the results showed the average-sized model condition had a more positive attitude toward the ad and higher purchase intention than participants in the thin model condition and the large-sized model condition. The findings continue to support the research that using an average-size model is more effective than thin models.

Along with studies about the negative effects of using thin models, several studies show there may be no difference between thin models and average-size models in advertising effectiveness (Halliwell & Dittmar, 2004; Diedrichs & Lee, 2011). Halliwell and Dittmar (2004) did a study that showed there was no difference in advertising effectiveness between the thin model and the average sized model. The researchers examined the impact of model body size on body-focused anxiety and advertising
effectiveness, and the results showed that exposure to thin models resulted in greater body-focused anxiety (for women who internalized the thin ideal), but the advertisements were equally effective, regardless of the model’s body size.

Diedrichs and Lee (2011) explored the advertising effectiveness of average-size female fashion models and their impact on the body image of men and women. Participants were exposed to one of three advertisement conditions – no models, thin models, and average-size models – and the results showed both men and women rated the average-size models equally effective in advertisements as thin models and no models. The average-size models also produced a more positive body image among men and women, compared to the thin models. The results of both studies (Halliwell & Dittmar, 2004; Diedrichs & Lee, 2011) suggest that advertisers can successfully use an attractive, but “larger” model and at the same time, avoid body-focused anxiety in female consumers and produce a positive body image among male and female consumers.

Despite many studies showing the negative effects of using thin models and the positive effects of using average-size models, there is some research that shows thin models produce higher ad attitude and brand attitude (D’Allesandro & Chitty, 2011). Janssen and Paas (2013) briefly discussed this contradicting research and suggested that using thin models only works up to a certain point of thinness. Janssen and Paas (2013) did their own experiment where participants were exposed to a bikini model whose body size ranged from extremely thin to oversized, and participant attitude toward the ad, attitude toward the brand, and purchase intention was measured. The bikini model with the most positive results was a “moderately thin model”. The
researchers claim that “moderately thin models” are optimal when advertising apparel or fashion.

Previous research regarding the effects of model body size show a variety of findings, with some contradicting empirical results. While most research suggests the use of thin models in advertisements creates negative psychological effects on female consumers, the attitudes toward the ad and the advertising effectiveness vary. Despite a large amount of research supporting the notion that thin models produce less positive attitudes toward the ad than average-sized models, there are some studies which show the opposite effect or no difference between the thin models and average-size models. Some researchers suggest that the product being advertised may affect whether a thin model produces positive or negative effects (Anderson & Paas, 2014), but product type does not account for all the discrepancies in the research.

Theories Guiding the Research

In order to answer the research question, there are two major theories being applied. The first theory, social comparison theory, states that people compare themselves to others when they are unable to make self-evaluations on their own. The second theory, emotional response, states that emotions have stronger reactions than cognition, and emotional responses can have a direct influence on a person’s behavior that attitude judgements do not capture. The theories will help explain participants’ attitudes and emotions toward a weight loss advertisement.

Social Comparison Theory

Social comparison theory explains how media images affect body image perception (Jung and Bie, 2014). According to the social comparison theory (Festinger,
humans have an internal drive to compare themselves to similar others for self-evaluation when they are unable to evaluate themselves on their own and need an outside comparison standard. Moreover, social comparisons can be upward or downward (Festinger, 1954). Upward social comparison occurs when people compare themselves with those who are considered socially better off in some way, while downward comparison occurs when people compare themselves to others who are worse off (Wood, 1989). Upward comparisons tend to increase body-focused anxiety, while downward comparisons tend to be self-enhancing. People generally avoid upward comparisons, except when the trait, in this case weight, is highly socially desirable.

In the present study, the researcher hypothesizes an upward comparison will occur toward the mediated body type endorser because when people compare themselves with the idealized body images in mass media, researchers have found an upward social comparison occurs (Grogan, 1999). A large amount of research has demonstrated that comparisons with extremely thin models can and have a negative effect on the viewer’s self-perception (Grogan, 1999). The researcher hypothesizes either a downward or lateral (same) comparison will occur toward the realistic body type endorser depending how close the participant’s body type matches the endorser to which they are exposed. In addition, social comparison theory can help explain participant’s attitude toward the ad, attitude toward the brand, purchase intention, and emotional responses toward the weight loss ads that will be measured in this study.

If participants compare themselves to the model, social comparison theory can help explain why a participant feels positively or negatively toward an advertisement, based on the type of endorser to which she is exposed. Once a participant has made a
comparison, emotional responses need to be measured because the positive or negative feelings toward the weight loss advertisement will produce different emotions.

**Emotional Responses Toward Advertising**

According to Franzen and Bouwman (2001), when thinking contradicts emotions, emotions win. Studies show that emotions elicit stronger reactions than cognitions, and due to the subject matter of the present study – weight loss – there is likely a strong emotional reaction to the ads because there’s an emotional investment in physical appearance (Gordon, 2006). Thus, emotion-based advertisements are more profitable and generate stronger brand associations than fact-based advertisements (Shen & Morris, 2016). Research shows that emotional responses toward advertising have substantial effects on attitude toward the ad, attitude toward the brand, and purchase intention (Holbrook & Batra, 1987; Xie, Morris & Zhang, 2011). Measuring emotional responses is important because emotions can have a direct influence on behavior that is not captured by attitude judgements (Xie, Morris & Zhang, 2011).

According to Russell and Mehrabian (1974), there are three independent and bipolar dimensions that are necessary and sufficient to define emotional states. The three dimensions are pleasure-displeasure, arousal-calm, and dominance-submissiveness (PAD). Multiple researchers have used this model to study emotion in the context of consumer behavior (Xie, Morris, Zhang, 2011). The PAD dimensions have been recently redefined from pleasure, arousal, and dominance (PAD) to appeal, engagement, and empowerment (AEE) to better suit advertising industry objectives (Jang, Chun, Ko, and Morris, 2014).
There are two methods to measure the three emotional dimensions: verbal or visual (Shen & Morris, 2016). The verbal method has participants respond to a list of emotion adjectives, while the visual method has participants respond to a set of figures that represent different dimensions of emotion. An advantage of the visual method is that it removes the cognitive processing for semantic judgement, which is a problem in all verbal measures of emotion. (Shen & Morris, 2016). For the present study, emotional responses will be measured visually through AdSAM (Advertising Self-Assessment Manikin) (Morris, 1995), the most frequently used visual measure in advertising research (Poels & Dewitte, 2006). AdSAM is described in detail in the following chapter. In the present study, the three emotional response dimensions (appeal, engagement, and empowerment) will be used to determine how participants feel about a weight loss advertisement with a mediated body type endorser, a realistic body type endorser, or no endorser.

Hypotheses

Social comparison theory states that people determine their personal and social worth based on how they stack up against others. When consumers are exposed to unrealistic or idealized images of people in the media, they compare their “mediocre” selves (consciously or unconsciously) with the idealized images, and such comparisons produce negative feelings and negative self-perceptions (Richins, 1991). Based on the social comparison theory and previous research regarding the positive effects of realistic body type endorsers on advertisements (e.g., Halliwell & Dittmar, 2004; Diedrichs & Lee, 2011), the researcher hypothesizes the following:
H1a: Subjects in the realistic body type condition will have a higher attitude toward the ad than subjects in the mediated body type condition and subjects in the control group.

H1b: Subjects in the realistic body type condition will have a higher attitude toward the brand than subjects in the mediated body type condition and subjects in the control group.

H1c: Subjects in the realistic body type condition will have higher purchase intentions than subjects in the mediated body type condition and subjects in the control group.

Previous research indicates that exposure to thin, idealized models in the media produces negative feelings toward oneself (Grabe, Ward, and Hyde, 2008; Crossley, Cornelissen, and Tovee, 2012). These negative feelings may result in a lower appeal toward the ad with the mediated model, therefore:

H2a: Subjects in the realistic body type condition will have a higher appeal dimension than subjects in the mediated body type condition and subjects in the control group.

Previous studies also show that women make upward comparisons with idealized media images, and upward comparisons are more likely to make women feel bad about themselves and powerless (Grogan, 1999). The researcher hypothesizes the following:

H2b: Subjects in the realistic body type condition will have a higher empowerment dimension than subjects in the mediated body type condition and subjects in the control group.
Finally, content analyses of weight loss advertisements show that the most common model used in weight loss ads are very thin Caucasian women (Jung and Bie, 2014). Women are most often exposed to unrealistically thin models, so these models are the norm and expected. Because engagement deals with interest and excitement, it is more likely women will be interested in an image they rarely see rather than one that is expected. Therefore,

H2c: Subjects in the realistic body type condition will have a higher engagement dimension than subjects in the realistic body type condition and subjects in the control group.

**Need for the Research**

While there is a significant amount of research on how different endorser body types affect attitudes toward advertising, the present study introduces the topic of weight loss advertising. Previous research has focused on beauty products, fashion, food, etc., but there is no research on endorsers promoting a weight loss product or service. The use of a weight loss product is unique because it is a product that focuses on body size. The present study also examines women’s emotional responses toward weight loss advertisements, which is a currently unexplored research area. To find the effects of endorser body type and emotional responses to weight loss advertisements, the researcher performed an experiment through an online survey, which is detailed in the following chapter.
CHAPTER 3
METHODOLOGY

The primary purpose of this study is to determine if the body type of an endorser used in a weight loss advertisement affects the attitude toward the ad, attitude toward the brand, purchase intentions, and emotional responses. To test the hypotheses, an experiment was conducted to establish causality and isolate the variables, making it the best design to test the hypotheses. This chapter highlights the research method and procedures used in the study. The chapter is broken into research design, variables, experimental stimulus, sample and sampling method, pretest design, experimental procedure, and proposed analysis.

Operational Definitions

For the present study, there is one independent variable (endorser body type), four dependent variables (attitude toward the ad, attitude toward the brand, purchase intentions, and emotional responses), and four covariates (body esteem, BMI, perceived physical fitness, and dieting intention). Each variable is defined below.

Independent Variable

The independent variable, which is the manipulated variable, is endorser body type. Endorser body type is a nominal variable with three categories: mediated body type endorser, realistic body type endorser, and no endorser. The mediated body type endorser is a female model who represents the media’s ideal female body, which is tall, thin, and beautiful (Polivy & Herman, 2004). Models in the media have an average BMI of 16 and a WHtR of .34 (Firger, 2016; Jonah, 2013). For the present study, the mediated endorser model is attractive, thin, and has a small waist. The realistic body type endorser is a female model who looks like the average American women. The
average American woman weighs 166 pounds, has a BMI of 26.5, and a WHtR (waist-to-height ratio) of .58 (Firger, 2016; Fratello, 2016). In the present study, the realistic endorser model is attractive, but heavier and has a larger waist, with the goal of resembling the body proportions of the average American woman.

Both endorsers use the same model as the base. The image of the endorser came from Adobe Stock images to ensure the model was an unknown individual to prevent bias toward a public figure. The models are a full body shot of a young, attractive woman wearing athletic clothes. She is pleasant looking, but not overly attractive, to not influence participant’s opinions with the model’s beauty. Using the same model removed confounding variables regarding appearance, such as attractiveness, skin color, or body position.

Then, the model was digitally manipulated using Adobe Creative Cloud Photoshop to become either a “mediated endorser” or “realistic endorser”. Two versions of each body type were created for the pretest, resulting in four models to be tested. For the pretest, the researcher tested the models against the Contour Drawing Scale to verify that a mediated body and a realistic body were created. The pretest is described in detail later in this chapter.

**Dependent Variables**

The dependent variables were attitude toward the ad, attitude toward the brand, purchase intentions, and emotional responses. They were measured after participants were exposed to the weight loss advertisement. The first dependent variable is the attitude toward the ad, which is a “pre-disposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure
occasion” (Lutz, 1985, pg. 46). It was measured as an interval variable using three 7-point semantic differential scales: good/bad, pleasant/unpleasant, and favorable/unfavorable. Cronbach’s alpha is 0.89 (MacKenzie and Lutz, 1989).

Attitude toward the brand is “a relatively enduring, unidimensional summary evaluation of the brand that presumably energizes behavior” (Spears and Singh, 2004, pg. 55). It was measured as an interval variable using three 7-point semantic differential scales: good/bad, pleasant/unpleasant, and favorable/unfavorable. Cronbach’s alpha is 0.86 (MacKenzie and Lutz, 1989).

Purchase intentions are “an individual’s conscious plan to make an effort to purchase a brand” (Spears and Singh, 2004, pg. 56). It was measured as an interval variable using a 2-item scale. Each item was rated from 1 to 7 on level of agreement with the statement (1=strongly disagree, 7=strongly agree). Statements included: “I have a strong interest in buying this product” and “I plan to buy this product”. Cronbach’s alpha is 0.97 (Spears and Singh, 2004).

Emotional response measures how participants feel toward each ad they are exposed to. Emotional responses will be measured as an interval variable using AdSAM (Advertisement Self-Assessment Manikins). AdSAM is a visual representation of Mehrabian and Russell’s (1997) PAD Model, which states that every emotion is a combination of the three dimensions of Pleasure, Arousal, and Dominance. These dimensions have been redefined as Appeal, Engagement, and Empowerment to better suit industry needs (Shen & Morris, 2016). AdSAM uses graphics rather than words to depict the three dimensions, which eliminates cognitive processing for semantic judgement (Shen & Morris, 2016). The scale shows graphic characters in a line along
three continuous nine-point scales. Appeal depicts how positive or negative a participant feels toward the ad, engagement depicts how involved in the feeling the participant is, and empowerment depicts how empowered the participant feels (Shen & Morris, 2016).

**Covariates**

The covariates (i.e., control variables) in the study are body esteem, participant BMI, perceived physical fitness, and dieting intention. The covariates are controlled during data analysis because they may affect the results of the study.

Body esteem refers to self-evaluations of one’s body or appearance (Mendelson, Mendelson, and White, 2001). It will be measured using the Body-Esteem Scale-Revised by Frost, Franzoi, Oswald, and Shields (2018). Franzoi and Shield (1984) originally created the Body-Esteem Scale with 35 items. Frost, Franzoi, Oswald, and Shields (2018) revised the scale and narrowed it down to 28 items to represent three subscales. For women, the subscales measure sexual attractiveness, weight concern, and physical condition. The scale for women has 23 individual body parts and functions that participants rate on a 5-point Likert scale that ranges from 1 “having strong negative feelings” to 5 “having strong positive feelings”. The sexual attractiveness scale includes rating body scent, buttocks, chest or breasts, appearance of eyes, sex drive, sex activities, face, head hair, and skin condition. The weight concern subscale includes rating waist, thighs, body build, hips, legs, figure or physique, appearance of stomach, and weight. The physical condition subscale includes physical stamina, muscular strength, energy level, physical coordination, health, and physical condition. A higher score overall indicates a more positive body evaluation. The Cronbach’s alpha for the
subscales of sexual attractiveness, weight concern, and physical condition are 0.72, 0.89, and 0.81, respectively (Frost, Franzoi, Oswald, and Shields, 2018).

Body Mass Index is a measure of a person’s body fat based on height and weight. According to the National Institutes of Health, there are four BMI categories: underweight (<18.5), normal weight (18.5-24.9), overweight (25-29.9), and obese (>30). Participants will be asked to report their height and weight, and the BMI will be calculated. The raw BMI score will be used (as opposed to putting people in categories); therefore, BMI was measured as an interval variable.

While BMI is commonly used among social scientists, there is consensus in medical literature that BMI is considered an inaccurate measure of fatness and obesity (Burkhauser & Cawley, 2008). BMI does not distinguish between fat and fat-free mass, such as muscle or bone. A lot of muscle can skew the results of a person’s weight, so muscular individuals may appear obese based on their BMI. Some researchers prefer to use the waist-to-height ratio or the waist-to-hip ratio as an indicator of health because it is more accurate (Burkhauser & Cawley, 2008). Unfortunately, many people do not know their waist or hip measurement, making these measurements impractical for the experiment.

The next covariate is perceived physical fitness, which is a self-reported measure of a person’s fitness level. It was measured using the International Fitness Scale (IFIS). The IFIS (Ortega et al., 2011) was developed to measure five basic aspects of fitness: general fitness, cardiorespiratory fitness, muscular strength, speed/agility, and flexibility. The scale has five questions that ask participants to rate their fitness level for the five aspects of fitness from 1 to 5 (1=very poor, 5=very good). The questions include “Your
The IFIS has an acceptable reliability (Ortega et al., 2011).

The last covariate is dieting intention, which is a person’s future behavioral efforts to lose weight (Cruwys, Platow, Rieger, and Byrne, 2013). It was measured using the Dieting Intentions Scale (DIS). Dieting intention was measured as an interval variable on a 7-item scale. The first two items (“In the next three months, I intend to go on a diet”; “In the next three months, I intend to reduce my caloric intake”) measure the cognitive intention to engage in dieting behaviors in the next three months rated from 1 to 7 (1=strongly disagree, 7=strongly agree). The last 5 items are 7-point semantic differentials used to measure the evaluative and emotional intention a person has to engage in dieting in the next three months (harmful/beneficial, unpleasant/pleasant, useless/useful, foolish/wise, bad/good). Cronbach’s alpha is 0.91 (Cruwys et al., 2013).

**Pretest for Endorser Images**

A pretest, in the form of a survey, was conducted to determine how well the models used for the “mediated body type” and “realistic body type” condition fit their operational definitions. The details of the pretest participants and the results are explained in the following chapter.

On the pretest survey, participants were first asked to rate “media’s ideal body” and a “realistic body” on the Contour Drawing Rating Scale (Thompson and Gray, 1995). The Contour Drawing Rating Scale shows nine contour drawings of women and men, with precisely graduated sizes (1=thinnest, 9=heaviest); for the pretest, only the female drawings were used. The average participant score for “media’s ideal body”
represented the “mediated body average”, and the average participant score for “realistic body” represented the “realistic body average”.

Next, participants were presented with four images of one female model. The model’s body was manipulated into four different body types of varying weight, two for each experimental condition (“mediated” and “realistic”). The images were shown individually in a random order, and the participants rated each image on the Contour Drawing Rating Scale. The model whose average score was closest to the “mediated body average” represented the “mediated body type endorser” in the experiment. The model whose average score was closest to the “realistic body average” represented the “realistic body type endorser” in the experiment.

**Experimental Stimulus**

The present study used a weight loss advertisement as the experimental stimulus. There were three versions of the stimulus, each one identical except for the endorser used. The first version used the “mediated body type”, which is a female model who portrays the media’s ideal body. The second version used the “realistic body type”, which is a female model who portrays a realistic body of an average American woman. The last version was the control group, which used a weight scale in place of an endorser. The control had no model so the participants were not influenced by a person.

The weight loss ad featured an online weight loss program with a fictitious brand, “BetterLife,” to avoid any bias participants may have had if they were familiar with branded weight loss programs. The ad’s design, layout, and copy were based on weight loss advertisements featured in women’s health and fashion magazines (e.g. *Self,*
Women’s Health, Shape), increasing ecological validity. The 8” x 11” ads were created in Photoshop by the researcher. After the ads were created, two advertising and weight loss experts were consulted to verify the ad looked realistic and contained realistic claims.

An online weight loss program was chosen over other weight loss products (shakes, diet pills, protein bars, etc.) because the online program focused on diet and exercise and realistic ways of losing weight. Many weight loss products such as shakes, pills, and protein bars claim to be a “miracle product”, but this can create feelings of deception among consumers (Lellis, 2016). The online program featured diet and exercise plans and promoted losing 10 pounds in a month, which is a realistic amount of weight loss in a month (Paula, 2017). The purpose of the ad was to be appealing but believable.

Sample and Sampling Method

All participants were women between the ages of 18 and 35 who currently live in the United States. The study focused on women because, according to a Gallup poll taken in November 2016, 60% of women in the United States want to lose weight and around 30% are currently trying to lose weight (Gallup, 2016). Research also shows that dieting is associated with increased risk for future onset eating disorders and 90% of people with an eating disorder are female (Stice and Burger, 2015). According to the National Association of Anorexia Nervosa and Associated Disorders, 95% of individuals struggling with an eating disorder are between 12 and 25 years old (ANAD, 2013). Because of these findings, the sample will be limited to 18 to 35-year-old women. The age range goes up to 35 years old to include all Millennial women.
For the experiment, there was a total of 151 participants, with 50 participants exposed to the mediated body type endorser, 49 participants exposed to the realistic body type endorser, and 52 participants exposed to the control with no endorser. Convenience sampling was used to gather participants. The participants were recruited from Amazon Mechanical Turk (MTurk), an online platform that allows individuals and businesses to coordinate the use of human intelligence to perform tasks that computers are unable to do, like surveys.

**Research Design**

The research design was a one factor, between subjects posttest only experiment with three conditions – mediated endorser, realistic endorser, and no endorser (the control group). Before the experiment, a pretest was performed to determine which models to use for the weight loss ads used in the experiment. The experiment was distributed through Qualtrics where participants were exposed to one of the three ad conditions and then they took the online questionnaire. Through the experiment, the researcher tried to establish causality and isolate the variables, making it the best design to test the hypotheses. The survey was able to measure the dependent variables and covariates and also collect participant demographic information.

**Procedure**

The survey for the experiment was created on Qualtrics, an online survey platform. The survey first gave instructions on AdSAM, then randomly showed one of the three ad conditions. Once the participants read through the weight loss ad they were exposed to, they rated their emotions on the AdSAM scales, then they rated their
attitude toward the ad, attitude toward the brand, and purchase intentions. Next, the covariates – body esteem, perceived physical fitness, dieting intentions, and BMI (height and weight) – were measured. Finally, participant demographics were measured.

The survey was linked to Amazon Mechanical Turk (MTurk), where MTurk recruited participants. Data collection took place on March 6, 2018. Participants were paid $0.30, and the questionnaire took approximately four minutes to complete. Once the data was in, it was organized on Microsoft Excel and then uploaded to SPSS to analyze the data.

**Analysis**

To analyze the data, the researcher used IBM SPSS Statistics (2015) to run MANCOVA tests because there is one independent variable, four dependent variables, and four covariates that needed to be controlled. The analysis tested to see if there was a significant difference (at the $p<.05$ significance level) between the following:

- Attitude toward the ad of participants in the mediated endorser condition, the realistic endorser condition, and the no endorser condition.
- Attitude toward the brand of participants in the mediated endorser condition, the realistic endorser condition, and the no endorser condition.
- Purchase intentions of participants in the mediated endorser condition, the realistic endorser condition, and the no endorser condition.
- Appeal response of participants in the mediated endorser condition, the realistic endorser condition, and the no endorser condition.
• Engagement response of participants in the mediated endorser condition, the realistic endorser condition, and the no endorser condition.

• Empowerment response of participants in the mediated endorser condition, the realistic endorser condition, and the no endorser condition.
CHAPTER 4
RESULTS

This chapter presents the results of the pretest and the experiment. The pretest determined which models to use for the endorsers in the experiment, and the experiment determined whether the body type of an endorser in a weight loss advertisement affected attitude toward the ad, attitude toward the brand, purchase intentions, and emotional responses of female consumers (while controlling for body esteem, BMI, perceived physical fitness, and dieting intentions). Participants were exposed to one of the three weight loss advertisement conditions – mediated endorser, realistic endorser, or no endorser – and then answered a survey that measured the dependent variables and covariates.

Pretest Participants and Results

The pretest took place on February 12, 2018, and a total of 32 women participated. The pretest participants were recruited through convenience sampling, where the survey was posted on the Facebook account of the researcher. The pretest participants had the same qualifications as the experimental participants (i.e., women between 18 to 35 years old who were born in the United States). The pretest participants ranged from 18 to 33 years old ($M = 26.8, SD = 3.13$), with the majority (66%) being White. The remaining participants were 19% Hispanic, 6% African American, 6% Asian, and 3% mixed race.

The first two questions on the pretest asked participants to rate the media’s ideal body and a realistic body on the Contour Drawing Rating Scale (a scale of nine female bodies, gradually increasing in size). The average participant score for “media’s ideal body” represented the “mediated average” and the average participant score for
“realistic body” represented the “realistic average.” The mediated average was 2.91 (SD=0.96) and the realistic average was 5.91 (SD=1.38). The mediated average and realistic average were statistically different from one another (t(31) = -11.81, p < .001).

Then, participants rated four models (Figure 1) on the Contour Drawing Rating Scale. Model 1 had a mean of 1.78 (SD=0.79), Model 2 had a mean of 3.13 (SD=0.98), Model 3 had a mean of 4.38 (SD=1.13), and Model 4 had a mean of 5.91 (SD=1.06). The mean for Model 2 (M=3.13) was the closest to the mediated average (M=2.91), so Model 2 was chosen as the mediated body type endorser. The means for Model 2 and the mediated average were not statistically different from one another (t(31) = -1.05, p > .30). The mean for Model 4 (M=5.91) was the same as the realistic average (M=5.91), so Model 4 was chosen as the realistic body type endorser. The models chosen (Model 2 and Model 4) were statistically different from one another (t(31) = -15.62, p < .001).

![Means of pretest models.](image)

**Figure 4-1.** Means of pretest models.

**Experiment Participants**

The participants for the experiment were recruited from Amazon Mechanical Turk. The experiment took place on March 6, 2018, and a total of 151 women
participated. The participants were randomly assigned through Qualtrics to one of the three ad conditions, with 50 participants exposed to the mediated endorser condition, 49 exposed to the realistic endorser condition, and 52 exposed to the no endorser condition. Participants’ ages ranged from 21 to 35 years old ($M=28.8$, $SD=3.64$). The majority of participants were Caucasian (57%), followed by Asian (14.6%), African American (9.3%), mixed race (7.3%), American Indian or Alaska native (6.6%), and Hispanic (5.3%). Nearly all participants (95%) had some higher education: 19% had some college education but no degree, 9% had a two-year degree, 47% had a four-year degree, 19% had a master’s degree, and 2% had a professional degree. The remaining 5% had a high school education.

**Experiment Results**

To test H1 and H2, one-way multivariate analysis of covariance (MANCOVA) tests were performed in SPSS. Body esteem, BMI, perceived physical fitness, and dieting intentions were included as the original covariates, but after seeing how ethnically diverse the participants were, ethnicity was also controlled for in the statistical analyses. The survey data from Qualtrics was exported and organized in Microsoft Excel. Once the data was organized, it was uploaded to IBM SPSS Statistics (2015), where it was analyzed.

**Hypothesis One Results**

Hypothesis 1 stated that: Subjects in the realistic endorser condition will have a higher attitude toward the ad (H1a), higher attitude toward the brand (H1b), and higher purchase intentions (H1c) than subjects in the mediated endorser condition and subjects in the no endorser condition. The descriptive statistics (Table 1.) showed the
realistic endorser had the highest attitude toward the ad \((M=5.29, \text{SD}=1.15)\), attitude toward the brand \((M=5.32, \text{SD}=1.14)\), and purchase intentions \((M=4.58, \text{SD}=1.75)\). The mediated endorser had the lowest purchase intentions \((M=4.14, \text{SD}=1.87)\), while the ad with no endorser produced the lowest attitude toward the ad \((M=4.81, \text{SD}=1.57)\) and attitude toward the brand \((M=4.89, \text{SD}=1.45)\).

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<th>Endorser Condition (Mean, Std. Dev.)</th>
<th>Mediated Endorser</th>
<th>Realistic Endorser</th>
<th>No Endorser</th>
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<tbody>
<tr>
<td>Attitude Toward Ad</td>
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<td>5.29(1.15)</td>
<td>4.81(1.57)</td>
</tr>
<tr>
<td>Attitude Toward Brand</td>
<td>5.05(1.28)</td>
<td>5.32(1.14)</td>
<td>4.89(1.45)</td>
</tr>
<tr>
<td>Purchase Intentions</td>
<td>4.14(1.87)</td>
<td>4.58(1.75)</td>
<td>4.29(1.85)</td>
</tr>
</tbody>
</table>

To test the statistical significance of the first hypothesis, a one-way multivariate analysis of covariance was performed in SPSS. The results of the MANCOVA test showed that Box’s M test was not significant, suggesting homogeneity of variance among the covariance matrices \((\text{Box’s } M = 19.82, p > .08)\). When the effects of BMI, body esteem, perceived physical fitness, dieting intentions, and ethnicity were controlled for, the multivariate test showed that the main effects of the ad condition were not significant \((\text{Wilk’s Lambda } = .97, F(6,276)=0.73, p > 0.62, \eta^2 = .02)\). Because the results were not significant, H1 cannot be supported.

**Hypothesis Two Results**

Hypothesis 2 stated that: Subjects in the realistic endorser condition will have a higher appeal response \((H2a)\), a higher empowerment response \((H2b)\), and a higher engagement response \((H2c)\) than subjects in the mediated endorser conditions and subjects in the no endorser condition. The descriptive statistics (Table 2.) show the mediated endorser had a slightly higher appeal response \((M=6.34, \text{SD}=1.70)\),
engagement response \((M=4.54, SD=2.15)\), and empowerment response \((M=5.80, SD=1.91)\) than the other conditions. The realistic endorser had a slightly lower appeal response \((M=6.15, SD=2.14)\), while the control group with no endorser had the lowest engagement response \((M=4.20, SD=2.21)\) and empowerment response \((M=5.38, SD=1.64)\) than the other conditions.

Table 4-2. Means for emotional responses.

<table>
<thead>
<tr>
<th>Endorser Condition (Mean, Std. Dev.)</th>
<th>Mediated Endorser</th>
<th>Realistic Endorser</th>
<th>No Endorser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appeal</td>
<td>6.34(1.70)</td>
<td>6.15(2.14)</td>
<td>6.22(1.88)</td>
</tr>
<tr>
<td>Engagement</td>
<td>4.54(2.15)</td>
<td>4.52(2.00)</td>
<td>4.20(2.21)</td>
</tr>
<tr>
<td>Empowerment</td>
<td>5.80(1.91)</td>
<td>5.67(1.59)</td>
<td>5.38(1.64)</td>
</tr>
</tbody>
</table>

To test the statistical significance of the second hypothesis, another MANCOVA test was performed. The results of the MANCOVA test showed Box’s M test was not significant, suggesting homogeneity of variance among the covariance matrices (Box’s M = 11.48 , \(p > .51\)). When the effects of BMI, body esteem, perceived physical fitness, dieting intentions, and ethnicity were controlled for, the multivariate test showed that the main effects of the ad condition on emotional responses were not significant (Wilk’s Lambda = .97, \(F(6,276)=0.63, p > 0.70, \eta^2 = .01\)). Because the results were not significant, H2 cannot be supported.
CHAPTER 5
DISCUSSION

The results of the study show there was no statistical difference between the means of the three ad conditions, suggesting that a mediated endorser, a realistic endorser, and no endorser produces the same attitude toward the ad, attitude toward the brand, purchase intentions, and emotional responses. This chapter will discuss the results for each hypothesis in more detail, the implications the results have for advertisers, the limitations of the study, and future research in the subject area.

Summary of Results

Hypothesis One Discussion

The first hypothesis tested to see if endorser body type affected attitude toward the ad, attitude toward the brand, and purchase intentions. The MANCOVA test showed the differences between the means for each endorser condition (mediated, realistic, and no endorser) were not statistically significant, so H1 was not supported. While the results were not statistically significant, they still have implications.

For attitude toward the ad (1=low attitude; 7=high attitude), the realistic endorser condition had the highest attitude toward the ad ($M=5.29$, $SD=1.15$), followed by the mediated endorser condition ($M=5.13$, $SD=1.21$) and the no endorser condition ($M=4.81$, $SD=1.57$). Because the advertisement promoted a weight loss product, the model was expected to be thin. Despite this expectation, the realistic endorser and the mediated endorser were equally effective, suggesting that a realistic model can be used, which is not what the industry often does.

For attitude toward the brand (1=low attitude; 7=high attitude), the realistic endorser condition had the highest attitude toward the brand ($M=5.32$, $SD=1.14$),
followed by the mediated endorser condition ($M=5.05, SD=1.28$) and the no endorser condition ($M=4.89, SD=1.45$). Typically, attitude toward the ad and attitude toward the brand are closely related, so if participants have a high attitude toward the ad, they will have a high attitude toward the brand (Spears & Singh, 2004). As with attitude toward the ad, the results show that realistic models and mediated models produced equal attitudes toward the brand. The equal attitudes toward the brand may indicate that participants in the realistic model condition liked that the brand chose to use a realistic model to promote the product and represent the brand and appreciated the promotion of size diversity.

For purchase intentions (1=low purchase intentions; 7=high purchase intentions), the realistic endorser condition had the highest purchase intentions ($M=4.58, SD=1.75$), followed by the no endorser condition ($M=4.29, SD=1.85$) and mediated endorser condition ($M=4.14, SD=1.87$). While the results were not significant, the trend shows the realistic model condition had the highest purchase intentions, suggesting that participants related better to the realistic endorser than the mediated endorser and felt more inclined to purchase the product. Because consumers are used to seeing unrealistic results in weight loss ads, they may not buy into the thin, mediated model presented in the ad because of personal experience. When a realistic model was used, the participants may have felt the claim was a bit more believable.

While the results showed the realistic model condition had the highest attitude toward the ad, attitude toward the brand, and purchase intentions, the differences between the means of the three ad conditions were not significant, implying that using a model with a realistic body is just as effective as using a model with a thin body. While
many studies show that average size models produce higher attitudes toward the ad 
(Anderson & Paas 2014; Sohn & Youn, 2013), there are several studies that show there 
is no difference between using the two different body type models (Halliwell & Dittmar, 
2004; Diedrichs & Lee, 2011). The present study adds to the research supporting the 
idea that realistic or average size models are just as effective as thin models. Previous 
research shows that images of thin models in the media produce negative feelings 
toward oneself (Grabe, Ward & Hyde, 2008), and the present study provides evidence 
that thin models and realistic models produce similar results on attitude and behavior 
toward an ad. Thus, advertisers can use a realistic model without losing advertising 
effectiveness. Industry implications are discussed in more detail later in this chapter. 

Based on the social comparison theory, the researcher originally hypothesized 
an upward comparison would occur toward the mediated model (producing negative 
feelings, which would result in lower attitudes toward the ad and brand and lower 
purchase intentions), and a downward comparison would occur toward the realistic 
endorser (producing positive feelings, which would result in higher attitudes toward the 
ad and brand and increase purchase intentions). While this hypothesis was not 
supported, the results imply that a lateral comparison may have occurred, meaning 
participants compared themselves on an equal level to the endorser to which they were 
exposed.

**Hypothesis Two Discussion**

The second hypothesis tested to see if endorser body type affected emotional 
responses toward the ad (on the three dimensions of appeal, engagement, and 
empowerment). The MANCOVA test showed the differences between the means for
each endorser condition (mediated, realistic, and no endorser) were not statistically
significant, which means H2 was not supported. While the results were not statistically
significant, they still have implications.

For the appeal response (1=lowest appeal; 9=highest appeal), the mediated
endorser condition had a slightly higher appeal response ($M=6.34, SD=1.70$) than the
no endorser condition ($M=6.22, SD=1.88$) and the realistic endorser condition ($M=6.15,
SD=2.14$). Because there was no significant difference between the means, other
aspects of the ad, including the colors, the copy, or the layout, may have appealed to
the participants. Because the advertisement was colorful and bright and used realistic,
scientifically-backed claims, participants likely had had equally positive responses to the
ad, regardless of the endorser used.

For the engagement response (1=low engagement; 9=high engagement), the
mediated endorser condition and realistic endorser condition had nearly the same
engagement with means of 4.54 ($SD=2.15$) and 4.52 ($SD=2.00$), respectively. The no
endorser condition had the lowest engagement ($M=4.20, SD=2.21$), but there were no
differences between the means of the three ad conditions. Because the two conditions
with an endorser had slightly higher engagement than the no endorser condition, there
is some evidence that having a person in an advertisement may increase engagement.
Furthermore, all ad conditions created only moderate engagement, suggesting that the
models or the product were not overly engaging or arousing. The standard deviations
were also large, which means the responses widely varied. Varied responses suggest
there was another driver that influenced the participant’s engagement such as a
whether a person is looking to lose weight or likes the idea of losing weight.
For the empowerment response (1=low empowerment; 9=high empowerment),
the mediated endorser condition had the highest empowerment ($M=5.80$, $SD=1.91$),
followed by the realistic endorser condition ($M=5.67$, $SD=1.59$) and the no endorser
condition ($M=5.38$, $SD=1.64$). The difference between the mediated endorser condition
and the realistic endorser condition is very small, but both endorser conditions have a
higher empowerment response than the no endorser condition, which could indicate
that participants felt some kind of response toward the endorser to which they were
exposed. Participants exposed to the mediated endorser may aspire to look like the
endorser, while participants exposed to the realistic endorser may identify with the
endorser; either feeling could increase a participant’s empowerment response.

Overall, the emotional responses of participants were very similar across the
three ad conditions, with no significant differences among any of the means. The appeal
response had the smallest range, with only a .19 difference between the highest mean
(mediated endorser, $M=6.34$) and the lowest mean (realistic endorser, $M=6.15$),
suggesting the participants’ relatively positive appeal toward the ad was based on other
aspects of the ad. Overall, the small differences between the means and the large
standard deviations of the three emotional responses toward the three ad conditions
suggests that participants were reacting toward other aspects of the ad, like the subject
matter (weight loss), the layout (bright and colorful), or the copy (scientifically-backed
claims).

**Implications for Advertisers**

While the results for both hypotheses were not statistically significant, the results
still suggest implications about the use of thin or realistic models in weight loss
advertising. The present study’s results showed that the body size of an endorser does not affect the attitude toward the ad, attitude toward the brand, purchase intentions, or emotional responses toward a weight loss advertisement. Because there is no significant difference between the types of endorsers used, weight loss advertisers can use a realistic body type endorser while ensuring the advertisement is just as effective as using a mediated body type endorser.

While both body types appear to be equally effective in selling a product, advertisers should consider using a realistic body type endorser because they reduce body-focused anxiety in female consumers and help promote size diversity in the media (Halliwell & Dittmar, 2004; Diedrichs & Lee, 2011). An advertiser’s promotion of size diversity can spark positive word-of-mouth, which can bring free, positive media attention and increased sales.

One of the most well-known and successful companies that promote size and beauty diversity is Unilever’s Dove. In 2004, Dove launched their “Real Beauty” campaign with the goal of spreading positivity among women, changing their perception of beauty, and widening the definition of beauty (Neff, 2014). The campaign was extremely successful, winning a multitude of ad awards and greatly increasing sales, from $2.5 billion in 2004 to $4 billion in 2014 (10 years after the launch of the “Real Beauty” campaign). After the campaign, Unilever funded research to analyze the campaign and see if beauty perceptions had changed. The research showed that women “define beauty on a wider array of qualities beyond looks, such as confidence,” and it also found that women base their ideas of beauty more on social media than traditional media (Neff, 2014). Thus, the use of more realistic models in weight-loss ads
has the potential to both sell products, produce favorable images of a brand, and contribute to positive body image.

Moreover, the present study’s findings on emotional responses show that women have the same emotional responses (across the dimensions of appeal, engagement, and empowerment) toward the weight loss ads, regardless of the type of endorser to which they are exposed. These findings imply that using a mediated endorser produces the same emotions among female consumers as a realistic endorser. As mentioned with the Dove campaign, women are now seeing confidence as a beauty standard, and confidence is closely aligned to empowerment. If advertisers want to make their audiences feel beautiful, they need to create feelings of confidence and empowerment.

Overall, the present study’s findings help refute the claim that thin models more successfully sell products. The study addresses the concerns of the media industry regarding the marketability of average-sized models. If an average size model is just as effective as a thin model and produces a more positive body image to consumers while promoting size diversity, advertisers should think twice before using an unrealistically thin model for their advertisements. Of course, the findings from the study need more evidence and further examination, and it is unclear whether the results would change if a different product was advertised, but the present study contributes to refuting the claims of the advertising industry that “thinness sells” (Halliwell & Dittmar, 2004).

**Limitations**

While the goal of the study was to be as ecologically valid as possible, there are aspects of the study that may prevent the findings from being generalizable to all American women between 18 to 35 years old. First, the present study used Amazon
Mechanical Turk workers to collect data. Using MTurk workers may influence the results because the workers get paid for each survey they take, regardless of how quickly they take it. To help reduce false results, the results of participants who took less than one minute to take the entire survey were removed, but it is still possible that some participants rushed through the survey.

Along with the potential of rushed responses, the participants in the study were only exposed to one advertisement for a short period of time. Being exposed to only one advertisement for a short period may not produce strong negative or positive feelings. Research shows that continued exposure to thin models creates negative feelings, which can affect attitudes toward the ad (Halliwell & Dittmar, 2004). Exposure to many advertisements with mediated models or realistic models over a period of time may affect participant attitudes and emotions more strongly, which could produce statistically significant results. Also, the present study had no manipulation check in the experiment survey. Experiment participants did not rate the models they were exposed to on the Contour Drawing Scale (the scale that pretest participants used to rate the mediated endorser and realistic endorser). The experiment participants may not believe that the endorser they were exposed to represented a “mediated endorser” or a “realistic endorser”.

The idea of a “realistic body” for a woman is subjective and using the word “realistic” has its weaknesses. While the goal in the study was to have the realistic endorser resemble the body size of an average-sized American woman, the average American woman may not have a healthy weight or body size. While using an average-
size model can be good for the body image of female consumers (Diedrichs & Lee, 2011), the model's body may not be promoting a healthy body.

Finally, the present study may not have had enough subjects to pick up on what was going on. Because of the large number of variables being measured and controlled for, having about 50 participants exposed to each of the three ad conditions may not have been enough to produce statistical power. Given the number of variables, the present study would have only picked up large-level effects, and considering how often women are exposed to the type of advertising used in the study, any effects caused by the experiment were likely to be small.

**Future Research**

There are several areas that researchers can explore in future research, including the variables measured, type of participants used, and the experimental method. One area to explore is the deception problem in weight loss advertisements. Because weight loss ads account for the highest proportion of fraud claims to the FTC (Ethan, Basch, Hillyer, 2016), future research could measure how using different endorser body types affects feelings of deception among consumers.

Future research can also change the types of participants used in the study. The present study focused on American women between 18 to 35 years old. Conducting the same study but using male participants could show how men perceive female body types (specifically in weight loss advertisements). Also, doing the same study with male participants and male endorsers would show how men feel toward different body types used in weight loss advertisements. Because men and women have different concerns regarding their body (women typically focus on being thin, men focus on gaining
muscles) (Grossbard, Lee, Neighbors, Larimer, 2008), using men would give another perspective. The limited research in the area of male models used in media imagery show that exposure to muscular male models has a negative impact on men’s body image (Barlett et al., 2008). Researchers could also consider doing a study with different races or an older sample and see if attitudes differ with race or age. Conducting the study again but only using participants who are overweight could help produce significant results because women who are “normal weight” or “underweight” may have little to no interest in weight loss products.

Future research could change the experimental stimulus to produce stronger reactions. In the present study, the two endorsers represented a mediated endorser and a realistic endorser. Future research could use a thinner model for the mediated endorser to further emphasize the unattainable results of models used in weight loss ads. Also, the experimental stimulus starts with a negative message (“miracle pills don’t exist”), but the goal is to have an appealing ad that evokes positive feelings. Having the ad start with a positive claim could create more positive feelings toward the ad.

Finally, future research could explore the effects of continuous exposure to different endorser body types in weight loss advertisements. As mentioned previously, participants in the present study were only exposed to one advertisement. Previous research shows that repeated exposure to extremely thin models has a negative impact on young female consumers (Halliwell & Dittmar, 2004). Having participants exposed over a period of time to several advertisements with mediated models or realistic models could produce stronger attitudes and emotions toward the advertisements.
Miracle pills don’t exist.

Losing weight is about what you **EAT** and what you **DO**!

**Lose up to 10 lbs**
in the first month with BetterLife’s online weight loss program.

**BetterLife Features**
- Personalized diet plans with hundreds of quick and easy recipes.
- Custom exercise plans with hundreds of activities.
- Interactive charts and graphs showing your progress.

Sign-up NOW at BetterLife.com
Get 10 days FREE!

Figure A-1. No endorser condition.
Miracle pills don’t exist.
Losing weight is about what you **EAT** and what you **DO**!

Lose up to 10 lbs
in the first month with BetterLife’s online weight loss program.

**BetterLife Features**
- Personalized diet plans with hundreds of quick and easy recipes.
- Custom exercise plans with hundreds of activities.
- Interactive charts and graphs showing your progress.

**Sign-up NOW at BetterLife.com**
Get 10 days FREE!

Figure A-2. Mediated endorser condition.
Miracle pills don’t exist.

Losing weight is about what you **EAT** and what you **DO**!

**Lose up to 10 lbs**

in the first month with BetterLife’s online weight loss program.

**BetterLife Features**

- Personalized diet plans with hundreds of quick and easy recipes.
- Custom exercise plans with hundreds of activities.
- Interactive charts and graphs showing your progress.

**Sign-up NOW at BetterLife.com**

Get 10 days **FREE**!

---

Figure A-3. Realistic endorser condition.
Informed Consent
Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study
The purpose of this study is to examine the effects of weight loss advertising on female consumers between the ages of 18-35 years old.

What you will be asked to do in the study
You will be exposed to a weight loss advertisement, then you will be asked to answer questions based on the weight loss advertisement.

Time required
6-8 minutes

Risks and Benefits
The study deals with weight loss and body image. If you have a history of eating disorders or have body image issues, you may experience negative feelings. If this occurs, below is the Helpline link for the National Eating Disorders Association. We do not anticipate that you will benefit directly by participating in this experiment.
Website: https://www.nationaleatingdisorders.org/help-support/contact-helpline

Compensation
You will be paid $0.30 compensation for participating in this research. No worker who has completed the survey will be rejected and/or denied for any reason.

Confidentiality
Your identity will be kept confidential to the extent provided by law. The results of the survey will be used for research and none of the information provided will be traced back to you.
Your Worker ID will only be used for compensation and will not be maintained or connected to your responses, which will be anonymous. All data will be secured in Qualtrics.

Voluntary participation
Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study
You have the right to withdraw from the study at any time without consequence.

Who to contact if you have questions about the study
Lindsay Bouchacourt, Graduate Student, College of Journalism and Communications, Department of Advertising, Email: lbouchacourt@ufl.edu
Robyn Goodman, PhD, College of Journalism and Communications, Department of Advertising, Email: rgoodman@jou.ufl.edu

Who to contact about your rights as a research participant in the study
IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250
Phone: 392-0433.

Agreement
I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.
Q1
What is your gender?
• Male
• Female

Q2
Are you between 18 to 35 years old?
• Yes
• No

Q3
The figure above is called AdSAM. AdSAM is short for the Attitude Self-Assessment Manikin. AdSAM represents you and your feelings. You will be using AdSAM today to indicate your emotional responses to an advertisement. We want you to tell us how the advertisement makes you feel. Rate YOUR FEELINGS.

There are three rows of SAM characters...

The first row ranges from a very Big Smile to a very Big Frown (see picture below). This row represents feelings that range from completely HAPPY or ELATED to completely UNHAPPY or SAD.

The second row of SAM represents feelings that range from very STIMULATED or INVOLVED to very CALM or BORED.

On the third row, SAM ranges from a little figure to a great big figure. This row represents you feeling as though you are BEING CONTROLLED or CARED FOR on the left, or completely IN-CONTROL or DOMINANT on the right. This row does not represent positive or negative feelings, just how in-control you feel.

You will make a total of three selections, one on each row. Click the button directly below the picture or between the pictures.
If your feelings are between the pictures, click the button underneath the space between the pictures. We want you to tell us how the item makes you feel. Don't rate the item, rate YOUR FEELINGS.

On the next page, you will be exposed to an advertisement.

Q4
Below is a weight loss advertisement. Carefully read through the ad and take note of the ad's layout. On the following page, you will rate your feelings toward the ad.

Q5
Rate your feelings.

Q6
Rate your feelings.
Q7
Rate your feelings.

Instructions: Answer the following questions based on the weight loss advertisement you saw in the last question. If you need to look at the advertisement again, use the back button below (your answers will not be erased).

Q8
Please choose your level of agreement for each statement about the weight loss advertisement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I respond favorably to this ad.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I like this ad.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have a positive feeling toward this ad.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>This ad is good.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q9
Please choose your level of agreement for each statement about the weight loss advertisement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This brand is attractive.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>This brand is nice.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My opinion about this brand is good.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I appreciate this brand.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q10
Please choose your level of agreement for each statement about the weight loss advertisement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a strong interest in buying this product.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I plan to buy this product.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q11  
Instructions: Below is a list of body parts and functions. Please read each item and indicate how you feel about this part or function of your own body.

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Have strong negative feelings</th>
<th>Have moderate negative feelings</th>
<th>Have no feeling one way or the other</th>
<th>Have moderate positive feelings</th>
<th>Have strong positive feelings</th>
</tr>
</thead>
<tbody>
<tr>
<td>body scent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>head hair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hips</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>physical stamina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>waist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>energy level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>thighs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>skin condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>body build</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>figure/physique</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>buttocks</td>
<td></td>
<td></td>
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<td></td>
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<td>health</td>
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<td>sex activities</td>
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<td>chest or breasts</td>
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<td>appearance of eyes</td>
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<td>face</td>
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<td>physical condition</td>
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<td>appearance of stomach</td>
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<td>physical coordination</td>
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<td>muscular strength</td>
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</table>
Instructions: Please answer the following questions pertaining to your physical fitness.

Q12
Your general physical fitness is:
- Very poor
- Poor
- Average
- Good
- Very good

Q13
Your cardiorespiratory fitness (ability to do exercise, for instance running, for a long time) is:
- Very poor
- Poor
- Average
- Good
- Very good

Q14
Your muscular strength is:
- Very poor
- Poor
- Average
- Good
- Very good

Q15
Your speed/agility is:
- Very poor
- Poor
- Average
- Good
- Very good

Q16
Your flexibility is:
- Very poor
- Poor
- Average
- Good
- Very good
**Q17**
Rate how much you agree with the following statements.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the next three months, I intend to go on a diet.</td>
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<tr>
<td>In the next three months, I intend to reduce my calorie intake.</td>
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</tbody>
</table>

**Q18**
If I diet in the next three months, this would be...

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<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>Harmful</td>
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<td>Unpleasant</td>
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<td>Useless</td>
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<td>Foolish</td>
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<tr>
<td>Bad</td>
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</tbody>
</table>
Q19
How tall are you in inches?
Note: 5 feet = 60 inches; 6 feet = 72 inches. Example: 5 feet 5 inches = 65 inches.
________________________________________________________________

Q20
What is your weight in pounds?
________________________________________________________________

Q21
How many years have you lived in the United States?
________________________________________________________________

Q22
What is your age (in years)?
________________________________________________________________

Q23
What is your annual household income (before taxes)? If you’re still a student or dependent on your parents, list their annual income.
  • Less than $10,000
  • $10,000 - $19,999
  • $20,000 - $29,999
  • $30,000 - $39,999
  • $40,000 - $49,999
  • $50,000 - $59,999
  • $60,000 - $69,999
  • $70,000 - $79,999
  • $80,000 - $89,999
  • $90,000 - $99,999
  • $100,000 - $149,999
  • More than $150,000

Q24
What is your highest level of education?
  • Less than high school
  • High school graduate or equivalent (e.g. GED)
  • Some college, but no degree
  • 2 year degree
  • 4 year degree
  • Master's degree
  • Professional degree (e.g. MD, DDS, JD)
  • Doctorate (e.g. PhD, EdD)
Q25
What is your ethnicity? Check all that apply.

- Caucasian
- Black or African American
- Hispanic
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other (please specify)
REFERENCES


BIOGRAPHICAL SKETCH

Lindsay Bouchacourt was born in Miami, FL. She spent most of her time growing up in the greater Fort Lauderdale area. In May 2015, Lindsay earned a B.S. in communication majoring in advertising at the University of Miami in Coral Gables, FL while simultaneously competing as a Division I athlete in women’s varsity rowing. After a brief sabbatical to gain real-world experience working in the marketing space at AutoNation, Lindsay moved to Gainesville, FL to pursue higher education at the University of Florida. Alongside her classes, Lindsay worked as a teaching assistant in the College of Journalism and Communications and a tutor for student-athletes in the University Athletic Association. She received her master’s degree in the summer of 2018. Lindsay will continue her education at the University of Texas at Austin to pursue a Ph.D. in advertising beginning in the fall of 2018.