

THE BRAND AND HEALTH OUTCOMES OF ATHLETIC BRAND ADS

By

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To my family, friends, and colleagues - Thank you for all your love and support

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TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGMENTS.....	4
LIST OF TABLES.....	9
LIST OF FIGURES	11
ABSTRACT	12
CHAPTER	
1 INTRODUCTION.....	14
2 A REVIEW OF LITERATURE.....	17
Effects of Media and Advertising	17
Long Term Effects of the Media	17
Social Benefits of Media and Advertising.....	21
Theories	24
Social Comparison Theory.....	24
Source Effect Theories	27
Source Effectiveness Models.....	29
Source Credibility Model	29
Source Attractiveness Model	31
Product Match-Up Model.....	32
Meaning Transfer Model.....	32
Social Influence Processes	33
Hypotheses and Research Questions.....	34
Hypotheses	36
Research Questions.....	39
3 PRETEST	42
Participants	43
Operationalization	43
Stimuli.....	44
Procedure	45
Measures	47
Attitude Towards the Brand	47
Attitude Towards the Ad	47
Attractiveness.....	48
Similarity	48
Desirability	49
Identification	49
Body Mass Index	49

Manipulation Checks.....	50
Body size assessment.....	50
Digital alteration.....	50
Results.....	51
Brand Selection.....	51
Stimuli Selection.....	52
Model size analysis of all variables	52
Body size assessment analysis	55
Attractiveness analysis.....	59
Discussion.....	63
4 MAIN EXPERIMENT.....	75
Participants	75
Design	76
Procedure	76
Measures	77
Measures Also Present in the Pretest.....	77
Additional Measures.....	78
Attitude towards exercise	78
Intentions to exercise	78
Body image perceptions.....	79
Purchase intentions.....	79
Participant information	80
Results.....	80
Hypothesis 1	81
Attitude towards exercise	81
Intentions to exercise	81
Body image perceptions.....	82
Hypothesis 2	82
Attitude towards the ad	82
Attitude towards the brand.....	83
Purchase intentions.....	83
Hypothesis 3	83
Hypothesis 4.....	84
Research Question 1	84
Attitude towards exercise	84
Intentions to exercise	85
Body image perceptions.....	85
Research Question 2	86
Attitude towards the ad	86
Attitude towards the brand.....	86
Purchase intentions.....	86
Research Question 3	87
Attitude towards exercise	87
Intentions to exercise	87
Body image perceptions.....	88

	Attitude towards the ad	88
	Attitude towards the brand.....	88
	Purchase intentions.....	89
	Further Analysis with Additional Variables	89
	Attitude towards exercise	89
	Intentions to exercise	90
	Body image perceptions.....	91
	Attitude towards the ad	92
	Purchase intentions.....	93
	Manipulation check.....	93
5	DISCUSSION.....	100
	Health Outcomes	100
	Brand Outcomes	106
	Additional Explanations	108
6	LIMITATIONS	110
APPENDIX		
A	INFORMED CONSENT FOR PRETEST QUESTIONNAIRE.....	113
B	PRETEST QUESTIONNAIRE.....	114
C	INFORMED CONSENT FOR MAIN EXPERIMENT	121
D	MAIN EXPERIMENT QUESTIONNAIRE.....	122
E	PRETEST STIMULI.....	131
	Ad 1 Thin Model 2.....	132
	Ad 1 Thin Model 1	133
	Ad 1 Neutral Model	134
	Ad 1 Normal Model 1	135
	Ad 1 Normal Model 2.....	136
	Ad 2 Thin Model 2.....	137
	Ad 2 Thin Model 1	138
	Ad 2 Neutral Model	139
	Ad 2 Normal Model 1	140
	Ad 2 Normal Model 2.....	141
	Ad 3 Thin Model 2.....	142
	Ad 3 Thin Model 1	143
	Ad 3 Neutral Model	144
	Ad 3 Normal Model 1	145
	Ad 3 Normal Model 2.....	146
	Ad 4 Thin Model 2.....	147
	Ad 4 Thin Model 1	148

Ad 4 Neutral Model	149
Ad 4 Normal Model 1	150
Ad 4 Normal Model 2	151
Ad 5 Thin Model 2	152
Ad 5 Thin Model 1	153
Ad 5 Neutral Model	154
Ad 5 Normal Model 1	155
Ad 5 Normal Model 2	156
F MAIN EXPERIMENT STIMULI.....	158
Target Ad 1	159
Target Ad 2	160
Target Ad 3	161
Target Ad 4	162
Target Ad 5	163
Filler Ad 1	164
Filler Ad 2	165
Filler Ad 3	166
Filler Ad 4	167
LIST OF REFERENCES	168
BIOGRAPHICAL SKETCH	173

LIST OF TABLES

<u>Table</u>	<u>page</u>
3-1 Participants' ages.....	69
3-2 Coding of stimuli.....	70
3-3 Participants' perceptions of the brands (Attitude towards the brand).....	71
3-4 Differences between the size means for each dependent variable	72
3-5 Differences in model sizes and ads in terms of the body size assessments of the models	73
3-6 Differences in model sizes and ads in terms of model attractiveness.....	74
4-1 Participants' age	94
4-2 Coding main study stimuli.....	94
4-3 Means for attitude towards exercise.....	94
4-4 ANOVA test on attitude towards exercise.....	94
4-5 ANCOVA test on attitude towards exercise with other variables as covariates	95
4-6 Means for intentions to exercise.....	95
4-7 ANOVA test on intentions to exercise.....	95
4-8 ANCOVA test on intentions to exercise with other variables as covariates	95
4-9 Means for body esteem	96
4-10 ANOVA test on body esteem	96
4-11 ANCOVA test on body esteem with other variables as covariates.....	96
4-12 Means for body weight and shape.....	96
4-13 ANOVA test on body weight and shape.....	97
4-14 ANCOVA test on body weight and shape with other variables as covariates	97
4-15 Means for attitude towards the ad	97
4-16 ANOVA test on attitude towards the ad	97

4-17	ANCOVA test on attitude towards the ad with other variables as covariates.....	98
4-18	Means for attitude towards the brand.....	98
4-19	ANOVA test on attitude towards the brand.....	98
4-20	Means for purchase intentions.....	99
4-21	ANOVA test on purchase intentions.....	99
4-22	ANCOVA test on purchase intentions with other variables as covariates	99
4-23	Manipulation check of model size	99

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
2-1 Hypotheses and research questions model	41

Abstract of Thesis Presented to the Graduate School
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The media can be very powerful as it influences the thoughts and actions of humans. In fact, much of what people learn comes from media (Wiseman, Sunday, & Becker, 2005). Some theoretical frameworks such as the Social Comparison Theory have shown that people have a tendency to compare themselves with the media in order to learn what is acceptable and evaluate themselves in terms of appearance, behaviors, attitudes, etc (Festinger, 1954; Berger, 1977; Martin & Kennedy, 1993; Richins, 1991). However, the characteristics of the person being used as a reference point for comparison could persuade and influence others (Source Effects theories) (Hass, 1981; DeShields, Kara, & Kaynak, 1996). The Social Comparison theory has shown that similarity between the model and the viewer can influence behavior (Martin & Kennedy, 1993; Richins, 1991), while the Source Effects theories have found that similarity is also a way that actions and opinions are influenced (Hass, 1981).

This study aimed to find a way in which athletic shoe advertising could positively influence consumers' health perceptions and brand attitudes. Specifically, it studied how a model's characteristics in terms of body size and behavior (whether she was engaged in the behavior (running) being studied or not engaged in it) influenced health outcomes such as

attitude towards exercise, intentions to exercise and body image self-perceptions as well as brand outcomes including attitude towards the ad, attitudes towards the brand and purchase intentions.

A normal-looking model was expected to have a better impact in health and brand outcomes than a thin model because women could relate to her, allowing them to create better attitudes and not develop body image issues. (Source Effects theories) (Martin & Kennedy, 1993; Richins, 1991; Hass, 1981). This similarity between the model and audience also increases the chances of modeling the behaviors shown in the ad, but these results were not obtained.

This study was also conducted to explore participant's health and brand outcomes when viewing an ad that portrays a model engaged in a behavior (running) versus one that is not engaged in a behavior (modeling). Surprisingly, the results showed that a model portraying or lacking the behavior obtained the same health and brand outcomes.

This study contained certain limitations that could have influenced the results obtained. For example, the vast majority of the sample stated that they already exercised weekly. Therefore these women could not be influenced into having better attitudes towards exercise or intentions to exercise if they already did so. The women studied also had positive self body perceptions and could not be influenced by a single ad. The product that was being tested, Asics athletic shoes, was a cause of limitation because people's reasons for purchasing running shoes varied greatly. Instead, it could be inferred they answered questions about attitudes towards the ad and brand based on previous knowledge.

CHAPTER 1 INTRODUCTION

The media and also advertising in particular have been dominant in strongly influencing consumer's thoughts and behaviors (Wiseman, Sunday, & Becker, 2005). Media effects have been studied for many topics, including tobacco use, stereotyping (Oppliger, 2007), and body image discrepancies (Groesz, Levine, & Murren, 2002). One of the first conceptualizations of media effects came in the form of the hypodermic needle theory, which states that the effects of mass media are immediate, direct and powerful (Lim & Kim, 2007). However, more current explanations delineate longer term effects that affect cultural norms in society (Maibach, 2007).

Media communications are omnipresent in today's society and incorporated in many aspects of consumers' lives. The increasing presence of media in our surroundings have a direct influence on increasing consumption of it (Maibach, 2007). By affecting our values and behaviors, the media play a social role in our culture. Much of what we learn comes from the media. Particularly for adolescents, who are heavy consumers of media, because it serves not only as a tool for comparison, but also as a social learning tool. Adolescents are in an awkward stage of their lives as they are uncertain of their identity. In pursuit of finding their identity in the society, they compare themselves, learn and model social behaviors from the media (Wiseman, Sunday, & Becker, 2005; Festinger, 1954).

The Social Comparison Theory seeks to explain the role of media in the self evaluation of a person. It states that people learn about their attitudes and what is considered acceptable by comparing themselves with other people and their opinions. In general, these comparisons are made with someone who is reasonably similar, even though when similarity is absent, people might compare themselves with dissimilar others. People often compare themselves with others in their surroundings and with models in the media (Festinger, 1954; Martin & Kennedy, 1993;

Richins, 1991). Meanwhile, the different Source Effect theories on persuasion establish that much of what people learn, in terms of attitudes and behaviors, is obtained from other people. Some people, specifically endorsers or models in the media and advertising, serve as better persuaders than others because of characteristics they possess such as similarity, attractiveness, credibility, trustworthiness, etc. (Hass, 1981).

While the effects of media are undeniably paramount in shaping people's perceptions of the world, past research has shown that the media are contributing factors for negative perceptions and attitudes toward a number of social issues, with considerable behavioral consequences. For example, media content has been linked to social stereotypes of disadvantaged groups and undesirable health behaviors in society (e.g., tobacco use, early sexual interactions and eating disorders) (Maibach, 2007). Most importantly, the media is also considered to be partly responsible for the increase in body image discrepancies. Since people visualize the real world like the ideal world seen in the media (Oppliger, 2007), they try to attain the bodies portrayed in the media, often by engaging in unhealthy or even dangerous behaviors such as disordered eating (Wiseman, Sunday, & Becker, 2005). The media are also criticized for promoting physical inactivity. According to the displacement theory (Maibach, 2007), media consumption has increased so dramatically over the years that people spend less time doing simple activities that would otherwise keep them physically active.

With the accumulated evidence and criticism, it is urgent that media professionals and advertising practitioners be more cognizant of the consequences in the content and the images in the media. They must seek ways to improve and contribute to society through their communications. By taking advantage of the fact that consumers are highly involved with the media, this study aims to find means by which advertising can positively influence consumers'

perceptions and lifestyle. Specifically, this study seeks to examine the extent to which specific product advertising, such as the advertising for athletic shoes or products related to physical activity, promote consumers' healthy lifestyle as well as influence brand-related attitudes and purchase intentions. To do so the study focuses on the role of model attributes and the presence or absence of behavior (running in this case) in athletic shoe advertising. It is expected that a strategic use of endorsers (models) and behavior in the ad leads to favorable evaluation of the brand and also contributes to promotion of physical activity and positive body image perceptions.

This study is not only important in making media professionals and advertising practitioners more aware of the consequences of the content they portray in the media. It also helps delineate a way to improve society by allowing the increase of health involvement among society, especially now that there is a displacement of energy expenditure (Maibach, 2007). Likewise, there are many stakeholders that could benefit from this study. The government and health professionals could benefit because they could use it as a way to raise awareness on health issues and motivate better lifestyles while stirring the economy. Gym owners and exercise equipment retailers could benefit from increasing sales of people looking for better lifestyles (Berry & Howe, 2004). Finally, one of the most important stakeholders that could take advantage of this study are brand managers. They could use the study to find a new way of advertising their product while creating a better corporate image. Problematic issues in society such as body image issues and lack of physical activity would be addressed, therefore leading to better self-concept and hopefully also influencing brand attitudes.

CHAPTER 2 A REVIEW OF LITERATURE

Effects of Media and Advertising

Research has shown that the media, specifically advertising, are among the factors that influence people's perceptions, thoughts and behaviors. For example, media effects on children, aggression (Sherry, 2007), stereotyping (Ramasubramanian, 2005), and body images are among a few frequent topics that have been studied. Although these effects from the media tend to be mostly negative (Ramasubramanian, 2005), there have been few studies that actually demonstrated positive impacts (Miller, 2007). Among the most noticeable effects the media delivers include affecting people's perceptions of themselves, especially in terms of body issues.

The media and advertising are not only tools used by companies to communicate a message about a product or service; they also help outline society by establishing ways to socialize. "Mass media and interpersonal channels enable consumers to learn and to socialize their attitudes and behaviors related to a variety of communication and consumption activities." (Lee, Salmon & Pack, 2007, p. 107). The mass media play a role in how society portrays its behaviors and norms as well as how they help aggression, health or simply everyday behaviors. The media influences the thoughts and feelings about a variety of issues including health and physical activity. This is due to the fact that the public constantly consumes large amounts of media (Maibach, 2007).

Long Term Effects of the Media

The long term effects that come from media and advertising are very prevalent. Even though media and advertising are not fully responsible, they direct people to thinking and behaving certain ways. This is illustrated by stereotyping issues and body perception issues that arise. Stereotyping, for example, has contributed to create distorted perceptions in people's

minds about race, gender and age (Lasorsa & Dai, 2007). However, it is the media effects on body image that have been studied more frequently.

The media have been established to be very influential in portraying the “thin ideal”. Using the word media refers to a variety of sources including radio, billboards, television and print media. Numerous studies have demonstrated that media can have damaging effects on women’s perceptions of themselves (Groesz, Levine, & Murren, 2002). The ways media expose images and messages are very influential as to determining what the ideal body type should be (Monro & Huon, 2005).

“The mass media have become a powerful force throughout the world and strongly influence how people see themselves and others. This is particularly true for adolescents” (Wiseman, Sunday, & Becker, 2005, p. 453). As Wiseman et al. state, the media penetrates people’s minds unconsciously. Therefore, it is logical that the media affects people’s attitudes about themselves and the world. The values they present are commonly incorporated into people’s daily lives. Adolescents are found to be the most vulnerable to the media because they are seeking their own identity and are susceptible to the images and messages they see. Often they compare themselves to what is portrayed in media. The Social Comparison Theory tries to explain this phenomenon (Wiseman, Sunday, & Becker, 2005) by stating that people compare themselves to other peers and visuals seen in the media (Thompson et al., 1999). Comparisons are usually made upward, which means that they compare themselves to someone with a superior attribute. Therefore, “as long as adolescents perceive the media as ‘better than’ themselves and use the media for a basis of comparison, then they are likely to conform to the media images” (Wiseman, Sunday, & Becker, 2005, p. 455). The use of these unrealistic standards usually brings about self-esteem issues, drive for thinness and body dissatisfaction (Wiseman, Sunday, &

Becker, 2005). A study conducted by Bessenoff explored body image discrepancies and social comparison based on ideal thin images portrayed in the media. It was discovered that exposure to these images increased body dissatisfaction (negative evaluation of one's body), negative mood, levels of depression and lowered self-esteem (Bessenoff, 2006).

This particular study relates with other studies where media encouraged women to control their weight because of the "culture of thinness" (Agliata & Tantleff-Dunn, 2004). Body image in women is derived from cultural influences and norms. This new phenomenon called "culture of thinness" shows that women have tried to alter themselves in accordance to the aesthetic standards of the period. The media and society's pressures create anxiety in women about their appearance. Women therefore turn to exercise as one of the alternatives of obtaining the body they desire. The "culture of thinness" comes not only from television, but from print ads as well. Although the ideal thin image is not promoted only by the media, its popularity is very influential in the hypothesis (Thompson et al., 1999).

Women, especially in western cultures, tend to compare themselves with the ideal women, which tends to be thin. They also compare themselves to other women around them. This accounts for different levels of body image disturbances that endorse thinness and attractiveness. Comparisons can be either upward (comparing oneself with someone who is superior in appearance) or downward (comparing oneself with someone who is inferior in appearance) (Thompson et al., 1999). A study sought to determine the effects of how the media portrays idealized images on women's bodies in terms of body shame and appearance anxiety. It was found that appearance anxiety increased after viewing the advertisements. Also, ads featuring body-related product advertisements were more likely to make a woman ashamed of her body and create appearance anxiety (Monro & Huon, 2005).

The commercial sector emphasizes appearance when developing a campaign (Berry & Howe, 2004). This emphasis on appearance can be a motivator for encouraging physical activity as it emphasizes appearance negatively and influences how a person feels about himself/herself in terms of body weight, fitness, age, etc. This in turn would influence exercise behavior because the person would try to attain that physique (Berry & Howe, 2005). This does not only apply to females, who focus on how thin they should be. Male participants exposed to an ideal body image in an advertisement became significantly more depressed with higher levels of muscle dissatisfaction than the participants exposed to neutral ads (Agliata & Tantleff-Dunn, 2004).

Some variables that are not studied as often are self-esteem and its impact on body image discrepancies. This is an important variable to study because it has been shown to influence behaviors such as eating habits. A study demonstrated that viewing thin models after having self-esteem issues resulted in body image issues (Jarry & Kossert, 2006).

Another important point is the influence of television viewing on consumer's body image and their consumption behavior related to that. A study conducted examined this influence for males and females. Results showed that television viewing did not affect males' image and consumption behavior. However, females real and ideal self-discrepancy increased, which led to an increase in consumption behavior to achieve the ideal body (Eisend & Möller, 2007).

These results are related to an observation noted: the differences between male and female. Among women, mass media have affected them most in terms of thinness, while men seem to be most affected by muscularity (Harrison & Bond, 2007). In fact, men who read fitness magazines have greater body dissatisfaction. This is due to the fact that men are more prone to mass media messages and the perceived pressure they have to be strong and muscular can prove to be

detrimental to them (Berry & Howe, 2005). This drive for muscularity has been linked to the influences that have developed in cultures. Mass media are what drives these cultures. Different tests have shown that men tend to emphasize muscle mass and physical bulk as part of the ideal male body shape. The successful man is pictured as having fashion sense, financial success and muscularity (Harrison & Bond, 2007). All these factors are driven from media exposure. Also contributing, especially among younger males, are video game characters and male action figures which have impossible proportions to live up to. However, it was found that exposure to magazine genres depicting moderately realistic images of the “ideal male figure” did not predict an increase in muscularity (Harrison & Bond, 2007).

Social Benefits of Media and Advertising

Most of the evidence provided demonstrates that the media and advertising have negative impacts on society, whether it is shaping beliefs or actions or even increasing consumerism. However, there are instances where the media and advertising have presented themselves as beneficial to society, not only in a business (economical) way, but also in a behavioral way.

Media and advertising work as a great way of communicating information and shaping markets (Calfee, 1998). Better price and quality information are transmitted to the audience. This is an important element that must be present in perfect competition. Better product knowledge leads to an increase in consumer welfare. Better price competition also leads to more homogenous prices among similar goods (Reilley, 1972). Another area that has been positively affected by the media and advertising has been consumers’ capabilities of processing information. Advertising should inform and persuade. Better informed consumers are better able to evaluate information and make decisions (Beltramini, 2006). For example, DTC works to educate consumers about medical conditions and possible treatments. So far, traditional media has been shown to help educate consumers and has enabled them to better interact with

their physicians. Consumers make more informed decisions and take more responsibility for their own health (Choi & Lee, 2007).

Advertising also benefits society because it increases the innovation of products and also leads to faster acceptance of the products. Better goods are produced that are new, more convenient and have better packaging. Quick acceptance is not only good for society; companies also benefit because it leads to quicker profitability (Reilley, 1972).

Media and advertisements' effects are also well-known because consumers use them everyday, and when it is taken away, they notice and demand for it to be returned (Calfee, 1998). First, consumers use media and advertising as mediums of entertainment. People like advertising because it can make "life a little more brighter" (Reilley, 1972). Second, advertising supplies information that benefits others than just the advertiser. Advertising can generate buzz or news by the claims it presents. This can in turn cause controversies and bring about reactions from competitors (Calfee, 1998).

Consumers have a variety of interests and sellers are always looking to cater to what consumers want. In the 1970's, consumers started demonstrating a particular interest in health (Calfee, 1998). This was an opportunity to apply social marketing. Social marketing refers to companies using their marketing efforts, power and budgets as a method to try to help with society's illnesses (Mason, 2002). Advertisers realized that advertising health-related issues to consumers would bring about very favorable results that would go beyond the interests of the advertisers. Public health advocates showed evidence that eating more fiber would reduce the risk of getting cancer. Kellogg's company took advantage of this new information and decided to use All-Bran advertising as a vehicle for the public service messages (Calfee, 1998).

Kellogg's messages brought secondary effects as well. For example, there was an increase in media coverage about diet and health. These news stories achieved what government agencies had been seeking for a long time and they were successful because they were able to capture people's attention. With the use of television, they reached the people that public health agencies had been trying to. People saw the benefits of fiber and started consuming it more (Calfee, 1998). Spillover benefits from advertising like the ones seen by Kellogg's are more common than most people recognize. Kellogg's has not been the only one able to reach similar results. Advertising for cleansing products such as soaps and detergents have been able to improve hygiene and public health. Toothpaste advertising was also able of improving the health of teeth (Calfee, 1998).

This is seen even today as "being green" becomes a popular trend. It is not uncommon for advertisers to incorporate this message in their communications. Not only are they portraying themselves as socially responsible, they are spreading the word on better lifestyles (Peck, 2006).

Companies, such as Kia Motors have incorporated this new trend into their own social marketing. They sought to persuade drivers to use their cars less often and more safely. There had been evidence that over 3,500 people were killed in car accidents yearly and over one billion car trips are for less than a mile. Studies also found that road traffic creates 25% of all Carbon Dioxide emissions, 75% of drivers have been victims of road rage and traffic is predicted to grow by 57% in the next 20 years (Mason, 2002). Kia decided to be proactive with this problem by developing a campaign that focused on "Think before you drive". The marketing team knew that people were still going to buy cars, but they encouraged a more responsible use of it so that it would be more environmentally safe (Mason, 2002).

Apart from health, media and advertising have also benefited positively other areas of society. Christians in Latin America have started visualizing the mass media as an opportunity to reach everyone who has not heard the gospel. It allows for the spread of evangelism in a non-religious format. The use of news programs, music videos and drama has been useful for Christians to send messages of spousal abuse, marital problems, etc. (MacHarg, 1997).

The media and advertising have also shown to be beneficial by bringing about positive changes in people's attitudes. Because of the media coverage that followed the tsunami in Asia in 2004 and Hurricane Katrina in 2005, people started paying more attention to the psychological effects of the disasters and the scarcity of mental services in those areas. People became more willing to help for the cause because they were better educated (Miller, 2007).

Theories

The reason the media, specifically advertising, can manipulate people so much into behaving, thinking or even feeling a certain way is because of the role it has obtained over time in society. People use the media to compare themselves and evaluate their opinions and perceptions. Different strategies, such as the use of credible models, attractive models, models similar to the audience or social influence processes used in advertising also influence people. This section details why people compare themselves to models in the media (Social Comparison Theory) and how the strategies used in advertising affect people's attitudes and behaviors (Source Effect Models).

Social Comparison Theory

A theory that explains imitation of behavior is the Social Comparison Theory (developed by Leon Festinger in 1954). The Social Comparison Theory is a model that tries to describe "how the receiver decodes or evaluates the spokesperson" (DeShields, Kara & Kaynak, 1996, p. 90) and what that person means to them. The theory seeks to explain how people assess their

opinions and abilities by comparing themselves to others in the media or by comparing themselves to others in their surroundings. It starts by assuming that people are motivated to know whether their opinions are correct. People compare general aspects of themselves such as personality and emotions, instead of specific attributes, to others (Festinger, 1954; Berger, 1977). Utilizing Festinger's theory as a framework, some studies have found that female college students, as well as adolescent and pre-adolescent girls, compare their physical attractiveness with what the media portrays in ads. This can result in changes of their self-perceptions on attractiveness and body image (Martin & Kennedy, 1993; Richins, 1991). It affects self-concept and self-esteem (Richins, 1991). Many believe that there were certain limitations to Festinger's views. Festinger stated that social comparisons were made with similar others. Current studies have now shown that comparisons can also occur with people that are not similar to the model (Martin & Kennedy, 1993). Nevertheless, for these comparisons to lead to imitation of behavior, universalistic standards need to be applied (Berger, 1977). Festinger also saw that people compared themselves to others only for self-evaluation (Festinger, 1954), the level of appropriateness of a person's abilities, opinions and personality traits (Martin & Gentry, 1997). The theory was later elaborated to include other motives such as self-improvement and self-enhancement.

Self-improvement refers to a person's attempt to learn to improve himself/herself. This usually, like self-evaluation, brings about upward comparison, where an individual compares himself/herself with someone that is better in the attribute of comparison. Nevertheless, self-improvement can have "demoralizing" effects. People must see how inferior they are on that attribute in order to improve. When the motive for comparison is self-improvement, self-perceptions in terms of physical attractiveness should increase temporarily because people

become inspired by the model and become anxious about the improvement to come (Martin & Gentry, 1997).

Self-enhancement refers to when a person compares himself/herself with someone that is worse off (Buunk et al., 1990) or tries to keep a positive perception of himself/herself in order to enhance their self-esteem (Martin & Gentry, 1997). In this case, downward comparisons occur. In addition, self-enhancement can also be seen through upward comparisons. There must be resemblance on other dimensions. This means that for a model to achieve effective upward comparison from, for example an adolescent girl's point of view, the model cannot be in her twenties because she is not similar to the girl in age.

The Social Comparison Theory has been found to be a way of getting people to model behavior. The theory established that people need to evaluate themselves and their performances with others. Models in the media can provide this information that people are looking for. For social comparison to take place, people need to be able to identify with the model in terms of similarity because this brings about imitation (Wheeler, 1991; Berger 1977).

Although other studies have demonstrated that dissimilar models to the audience have also brought about imitation of behavior as a consequence, Berger (1977) states that this could be due to the fact that universalistic standards instead of particularistic standards were used. This is where people compare themselves with what many other people are doing instead of the one present. Particularistic standards are needed for social comparison to occur because people compare themselves to others that have, for example, the same age.

Other studies, such as those by Stotland and his associates have shown that similarity does in fact lead to imitation of behavior. This is mostly due to the "generality of similarity schema". This rule states that people who are comparable in some aspects will likely be alike in

other aspects/characteristics. Therefore, the similarity between the model and the audience should lead to an increase in modeling behavior (Stotland, Zander, & Natasoulas, 1961; Stotland & Canon, 1972) because similarity between people and the model produces more uniformity, which helps determine which behaviors are the ones to be imitated (Berger, 1977).

Source Effect Theories

The source effect theories are based on the notion that “a high proportion of the knowledge and attitudes that each of us possess about our world was obtained from other people, and some persons who provide us with information have an easier time persuading us than others.” (Hass, 1981, p. 141) Among the many elements that influence the effectiveness and persuasiveness of an advertisement or media communication are the message and the source (model or endorser). These elements can create long term effects like the ones described in previous sections. Even though the product’s company is the underlying source of an advertising message, the models that are depicted in the advertisements are the ones that serve as a communicator to the audience (Atkin & Block, 1983). The audience’s perception of the source influences the effectiveness of the message (DeShields, Kara & Kaynak, 1996). Also, because of this, marketers and advertisers believe that the communicator’s or model’s characteristics has a significant effect on the persuasiveness of the message being conveyed (Pornpitakpan, 2003; Hass, 1981).

Currently, one of the biggest challenges marketers and advertisers face has to do with breaking through advertising clutter. The type of endorser selected for a product has been found to be an effective method of dealing with this issue. There are three types of endorsers that are most commonly used including the celebrity endorser, the expert endorser and the typical consumer (Friedman & Friedman, 1979).

A celebrity endorser can be an actor/actress, athlete, singer, etc. They are a well-known public figure due to their achievements in areas not related to the product (Friedman &

Friedman, 1979). Using celebrity endorsers in advertisements hold numerous benefits. One of the main reasons why marketers and advertisers seem to believe that celebrities function well as endorsers is because they are able to grab the attention of the consumer. They also are able to achieve higher recall from customers (Pornpitakpan, 2003; Ohanian, 1991; Atkin & Block, 1983), they are perceived as being more entertaining (Atkin & Block, 1983), they increase the likelihood that the consumers will like the advertisement (Hoyer & MacInnis, 2007), and they transfer positive qualities (such as attractiveness and likeability) to the advertised brand (Ohanian, 1990; Hoyer & MacInnis, 2007).

However, using a celebrity endorser may also have its weaknesses. The brand may be surpassed by the celebrity's presence. Also, the actions the celebrity takes in his/her personal life may be reflected on the brand (for example, Madonna's "Like a Prayer" video released at the same time as the Pepsi commercial she endorsed or Chris Brown's domestic abuse issues on the Wrigley's Campaign). Finally, if the celebrity endorses multiple products, consumers can get confused and not remember the product or brand (Charbonneau & Garland, 2006).

Even though they are not as frequently used as the celebrity endorser (which is used in an estimated 20% of television advertisements), there has been an increase in the use of the expert endorser (Biswas, Biswas, & Das, 2006). An expert endorser, also known as a professional endorser, is "an individual or group possessing superior knowledge regarding the product class endorsed" (Friedman & Friedman, 1979, p. 63). This superior knowledge is obtained through experience, training and/or study (Friedman & Friedman, 1979). Expert endorsements are usually used in a manner that focuses on the credentials and qualifications of the endorser. These endorsers enhance the believability of the ad, especially due to the strict restrictions the Federal Trade Commission (FTC) places (Biswas, Biswas, & Das, 2006).

Lastly, the typical consumer endorser is any person who does not have any particular knowledge of the product class except the one they obtain from its use (Friedman & Friedman, 1979). When advertising that contains testimonials are used, the typical consumer seems to be the best alternative to act as the spokesperson. This is because of their similarity and relate-ability to the target audience (Ohanian, 1990).

Source Effectiveness Models

Marketers and advertisers need to make sure that the endorser selected matches the product being advertised. Not all endorsers, especially celebrities can endorse any product. Previous research has identified several theoretical models that seek to explain the effectiveness of using endorsers. These models are: Source Credibility Model, Source Attractiveness Model, Product Match-up Model and Meaning Transfer Model (Pornpitakpan, 2003).

Source Credibility Model

The Source Credibility Model proposes that message effectiveness depends on the perceived credibility of the endorser (Charbonneau & Garland, 2006). The model came about from a study by Hovland and his associates. In their study, they analyzed the factors that created credibility of the communicator as seen by the consumers. They concluded that expertise and trustworthiness were the most important dimensions (Ohanian, 1990; Ohanian, 1991; Hoyer & MacInnis, 2007). However, other researchers have added attractiveness as a third main dimension (Friedman & Friedman, 1979). Others have defined these three main characteristics that affect persuasiveness of a source as: credibility, attractiveness and power (Hass, 1981). The influence an endorser (source) will have depends on a combination of the three dimensions. Trustworthiness must be present because it is the main dimension and without it, any other quality the communicator has will not be effective in producing attitude change (Friedman & Friedman, 1979). The result is generally known as “credibility” (Ohanian, 1991).

Expertise refers to how consumers view the endorser/communicator as a source of suitable claims (Ohanian, 1990; Pornpitakpan, 2003). Expertise can also be referred to as expertness, competence, authoritativeness or qualification (Pornpitakpan, 2003).

Trustworthiness refers to how confident consumers feel about the source and the information they are providing. It is the degree by which they see it as objective and honest (Ohanian, 1991). Research has shown trustworthiness has a strong influence on changing attitudes (Pornpitakpan, 2003). However, it has not been found to be an important determinant of the likelihood of purchase intention (Ohanian, 1991).

Attractiveness refers to a source characteristic that induces favorable attitudes. Often, attractiveness is thought of in terms of physical appearance. However, it can also include similarity, likeability and familiarity (Hoyer & MacInnis, 2007; DeShields, Kara & Kaynak, 1996). Consumers form positive stereotypes about attractive endorsers (Caballero & Solomon, 1984) because they are better liked (DeShields, Kara & Kaynak, 1996). Attractive endorsers have also shown to be better at changing beliefs in the consumers minds (Ohanian, 1991).

In a study conducted by Ohanian (1991), she was able to show the impact of each dimension of source credibility on purchase intentions. Attractiveness and trustworthiness did not affect purchase intentions; however, expertise did have some level of influence. This could be explained because of the increase in use of celebrities. Consumers view celebrities (which are usually attractive) as untrustworthy because they get paid large sums for endorsing a product.

Research on source credibility has shown that a highly credible source produces more positive attitude changes toward the product or issue advertised. This induces more behavioral changes (Ohanian, 1991) or behavior compliance (Ohanian, 1990). Therefore, highly credible

sources are usually more effective than less credible sources (Ohanian, 1991). Highly credible sources also tend to be more persuasive (Ohanian, 1990; Pornpitakpan, 2003).

It is the credible sources that have a larger impact on consumers' acceptance of the message. This is especially true when consumers had negative attitudes towards the product or brand when the message was complex, when it deviated from previous beliefs, and when there was a good match between the product and the endorser. Also, source credibility can influence attitudes by manipulating consumers' confidence in what they think and believe about the advertisement's message. In contrast, credible sources have less of an impact when consumers are unwilling to change existing attitudes, when they have higher confidence on their own beliefs and when the spokesperson endorses multiple products (Hoyer & MacInnis, 2007).

Source Attractiveness Model

The Source Attractiveness Model came about from psychological research conducted by McGuire and his "source valence" model. This model says that the effectiveness of a message depends on familiarity, likeability, similarity and attractiveness of the endorser as perceived by the consumer (Ohanian, 1990; Pornpitakpan, 2003). The source's familiarity is the knowledge consumers have of the endorser through exposure. Likeability is the affection consumers' have for the endorser based on physical appearance and behavior portrayed. Similarity refers to the resemblance between the endorser and the consumer (Pornpitakpan, 2003).

Attractiveness is important because physically attractive people are better liked and are better at inducing positive attitudes towards the brand. A person's initial judgment is based on the degree of attractiveness of the source. Attractiveness also influences attitude changes towards issues, products and advertised-based evaluations (Pornpitakpan, 2003). Physically attractive endorsers produce better ratings for advertisements, but they have not demonstrated

being able to produce acceptance of the message or behavioral intentions (Caballero & Solomon, 1984).

Product Match-Up Model

The origins of the match-up hypothesis came from advertising research that examined the disparity between different types of endorsers and the endorsed brand (Till & Busler, 2000). It was found that the effectiveness of endorsers varied by product (Friedman and Friedman, 1979).

The Match-up hypothesis proposes that an endorser may enhance evaluations between the product and advertisement if the characteristics of the product with the endorser are congruent (Kahle & Homer, 1985). “Most of the empirical work on the match-up hypothesis has focused on the physical attractiveness of the endorser. The conceptual argument is that attractive celebrities are more effective endorsers for products which are used to enhance one's attractiveness (lead to higher brand attitude and purchase intentions)” (Till & Busler, 2000, p. 1).

However, this match-up can also be in terms of attractiveness, similarity, etc. (Pornpitakpan, 2003; Charbonneau, 2006). Examples of successful product and endorser matching include Dorothy Hamill for Short & Sassy and Karl Maiden for American Express (Kahle & Homer, 1985). Recall and affect toward the brand increase (Pornpitakpan, 2003; Charbonneau, 2006).

Meaning Transfer Model

The Meaning Transfer Model explains that “celebrities” effectiveness as endorsers stems from the cultural meanings with which they are endowed. The model shows how meanings, such as lifestyles and status, can pass from celebrity to product and from product to consumer (McCracken, 1989, p.310). Meanings usually arise from society and cultures (McCracken, 1989) and endorsers represent meanings that reside in the “physical and social world” (Pornpitakpan, 2003). Their meaning then moves on to consumer goods and then gets involved

in consumers' lifestyles. This transfer can be facilitated through advertising and the fashion system. The movement from products to consumer lifestyles is carried out through the actions of the consumers (McCracken, 1989).

Social Influence Processes

It has been found that a great majority of what people know and the attitude people have about the world come from other people. It is also known that the persuasive impact of communication efforts vary depending on the characteristics of the source (the endorser) (Hass, 1981). Advertisers expect each of the different endorser types to influence consumers by means of different attributes. Therefore, each type of endorser will influence attitude change differently (Friedman & Friedman, 1979). Kelman (1961) identified three processes of social influence that cause individuals to model the attitude presented by the endorser as compliance, identification and internalization.

Compliance occurs when “an individual accepts influence from another person or from a group because he hopes to achieve a favorable reaction from the other” (Kelman, 1961, p.62). The individual may be looking to attain rewards or escape punishments. An example of this could be when a person tries to say “the right things” in order not to lose his/her job (Kelman, 1961).

Identification “occurs when individuals conform to the attitude or behavior advocated by another person because these individuals derive satisfaction from the belief that they are like that person” (Friedman & Friedman, 1979, p. 64). In other words, it is the process in which the audience accepts the influence from the endorser (source) due to their yearning to identify with them (Pornpitkpan, 2003). Individuals believe in the behavior that is being portrayed, but satisfaction is actually obtained from conforming (Friedman & Friedman, 1979). Identification deals with how likeable and how attractive the audience views the source. These are the key

elements that underlie persuasion by a celebrity endorser (Friedman & Friedman, 1979).

Identification can also come in different forms. Classical identification is when an individual defines his/her behavior in terms of the role of another. He or she attempts to be like the source. This can be done by saying or doing what the endorser does. Reciprocal role relationship is when the role of two individuals or groups are defined with reference to one another (Kelman, 1961).

Internalization refers to the process in which an individual accepts the source's influence and makes it a fundamental part of their attitudes or beliefs (Pornpitkpan, 2003). They conform to the attitudes or behaviors presented. They "internalize" those beliefs into their own value system. This process should occur when the source is seen as honest, sincere and being an expert (Friedman & Friedman, 1979). Unlike identification, internalization persuades through an expert endorser. An example of internalization is a person that adopts the recommendations of an expert because he/she finds them relevant to his/her life. Internalization does not involve the adoption of behavior in a rational manner (Kelman, 1961).

The typical endorser's influence falls between identification and internalization and between celebrity and expert endorsers. Even though a typical consumer endorser may influence the audience through identification (similarity to consumers), internalization also works since "similarity of usage may endow them with some expertise" (Friedman & Friedman, 1979, p. 64).

Hypotheses and Research Questions

The Source Effects Theories have made clear that some people serve as better endorsers for some products because they have a higher persuasive power. Hass (1981) established that the main characteristics for a source to have and be of influence in changing attitudes were credibility, attractiveness and power. Credible sources are able to change attitudes through internalization, the process by which a person integrates new attitudes into his/her values and

beliefs. Powerful sources are able to change attitudes through compliance, the process by which a person adopts the source's position because they want to attain certain rewards or evade certain punishments, but they do not accept the attitude.

Nevertheless, it is through attractive sources that attitudes can be changed by means of identification, the process by which a new attitude is adopted in order to achieve satisfaction like the one perceived through the source. As the endorser is liked or admired, people can choose to take similar interests, behaviors, attitudes, etc. The greater the source liking the larger the attitude change expected. Also, by assuming characteristics like the ones viewed positively in others (like endorsers, models or people in the media) or by viewing themselves related to them (similarity), self-concept and self-esteem are looked at positively (Hass, 1981).

Kelman's definition of identification has two dimensions: source attractiveness and similarity. More attractive sources are better persuaders than unattractive sources. Also, similar sources, such as salespeople with similar interests to the customers, are better persuaders than dissimilar sources (Wilson & Sherell, 1993).

This brings about a forth characteristic, similarity between the source and the audience, which has been very influential in having an effect on persuasion and changing attitudes. People are more likely to be influenced by a source that is similar to them than by one that differs. Therefore, similarity between the source and the audience can increase the persuasiveness of the message trying to be conveyed by the source by enhancing the sources attractiveness and presenting a sense of credibility. It has been noted that "similarity between the source and the recipient can affect the persuasiveness of a message independent of any changes in the attractiveness of the source perceived by the recipient." (Hass, 1981, p. 152). Even when attractiveness is controlled, as will be in this study, similarity between the source and the

audience can increase the persuasiveness of a message. This is because similarity increases the confidence that person has in the value/model being evaluated because it provides “relevant social support” (Hass, 1981, p. 153). The similarity that has been previously described goes in accordance with what Festinger states in the Social Comparison Theory in that people need to compare themselves with similar others for self-evaluation (Festinger, 1954).

It has also been shown that people learn what behaviors are acceptable through the media. People, especially adolescents who are looking to find themselves, model the behavior that the media portrays (Richins, 1991), and children who use their environment including parents and communications are dependent on their environment to learn (Hass, 1981).

Hypotheses

One of the variables manipulated in this study is model size. There are 2 levels of model size: thin and normal. For the purpose of this study, normal looking models will be defined as models that have a similar body size to the average college female. The average size was determined in the pretest conducted. Thin models were defined as models that showed a large discrepancy from the average woman (college female) by being significantly below the average size. Also related to model size is exercise or physical activity. This is defined as the “movement of the human body that results in the expenditure of energy at a level above the resting metabolic rate” (Maibach, 2007, p. 353). This could be running, jogging, playing sports, dancing or going to the gym.

Using the literature review, it can be said that people conform to the images they see portrayed in the media (Wiseman, Sunday, & Becker, 2005). It is understood that the depicted images will influence what viewers see as socially acceptable as well. In order to increase health behaviors in female viewers, women must be able to identify themselves with what is being portrayed. For this study, similarity between the source (model of the ad) and the audience

(participants) is described as the resemblance in terms of body size. Therefore, women who see a normal looking woman (model) instead of a thin woman will find themselves more similar to the model and will not develop body image issues because the discrepancy between the model and woman's body size has been reduced (Martin & Kennedy, 1993; Richins, 1991). This similarity increases the chances of modeling the behaviors shown in the ad (Hass, 1981).

The Social Comparison Theory states that people compare themselves to others whether it is their peers or people in the media (Thompson et al., 1999). These comparisons are most commonly made upward, meaning that they compare themselves to someone with a superior attribute. People such as adolescents will continue to use the media as a basis for comparison as long as they continue to view it as better than themselves. This will also lead to higher chances of them conforming to the media images (Wiseman, Sunday, & Becker, 2005). Since the media are considered to set the standards for socializing behavior and are considered to be better than people, comparisons to the media entail upward comparisons. Therefore, comparisons in this study will be considered upward comparisons.

The Social Comparison Theory also supports the influence of similarity on the chances of modeling behavior and changing attitudes. Studies that have used this theory as a basis have found that similar models also bring about imitation of behavior because people compare themselves to what the media shows and evaluate themselves in those terms (Festinger, 1954; Wheeler, 1991; Stotland, Zander, & Natasoulas, 1961; Stotland & Canon, 1972). Therefore, it can be hypothesized (H1) that a normal model will be more likely than a thin model to positively influence health outcomes. Health outcomes in this study include, attitudes towards exercise, intentions to exercise, and self-perceptions of body image.

H1a: A normal model will be more likely than a thin model to positively influence attitudes towards exercise.

H1b: A normal model will be more likely than a thin model to positively influence intentions to exercise.

H1c: A normal model will be more likely than a thin model to positively influence self-perceptions of body image.

The use of a normal looking model transfers meanings, such as lifestyles, from the endorser to the product and from product to consumer. This is referred to as the Meaning Transfer Model (McCracken, 1989). The normal model running will create better attitudes that will be transferred to the shoes and from the shoes to the consumer (audience) because of similarity. Individuals are more likely to be influenced by a persuasive message when they perceive it as coming from a source similar to themselves (Hass, 1981; Pornpitakpan, 2003). Therefore, better attitudes towards the brand will be formed. Consequently, it can be hypothesized (H2) that a normal looking model will be more likely than a thin model to influence positively brand-related outcomes. Brand-related outcomes, for this study, will include attitude towards the ad, attitude towards the brand, and purchase intentions.

H2a: A normal looking model will be more likely than a thin model to positively influence attitudes towards the ad.

H2b: A normal looking model will be more likely than a thin model to positively influence attitudes toward the brand.

H2c: A normal looking model will be more likely than a thin model to positively influence purchase intentions.

It has been established that consumers are more influenced by a model that is more similar to them (Hass, 1981; Pornpitakpan, 2003; Festinger, 1954; Wheeler, 1991; Stotland, Zander, & Natasoulas, 1961; Stotland & Canon, 1972). Identification is the process in which the audience accepts the influence from the endorser because they want to be like them (Pornpitakpan, 2003).

However, it is also believed that their desire to be like the model could manipulate results. Previous studies show how desire to be like unrealistically thin models has led to body image issues, mood changes, eating disorders and problems with self-esteem (Bessenoff, 2006; Groesz, Levine, & Murren, 2002; Thompson et al., 1999; Monro & Huon, 2005). Kelman (1961) found that people are trying to find satisfactory relationships with the source (desirability). Therefore, there is a presence of mediator variables such as identification with the model (similarity) and desire to be like the model that affect brand-related outcomes and health related outcomes.

H3: The effects of the model will be mediated by the extent to which users identify themselves with the model.

H4: The effects of the model will be mediated by the extent to which users desire to look like the model.

Research Questions

Even though there is a vast amount of information on how a model's body shape influences consumers' attitudes and behavior (Bessenoff, 2006; Groesz, Levine, & Murren, 2002; Thompson et al., 1999; Monro & Huon, 2005), there is a lack of research demonstrating the impact of product portrayal. Product portrayal refers to the manner in which the product is presented. In this case, it refers to whether the product is in use (behavior present/model engaged in the behavior) or not in use (behavior absent/model not engaged in the behavior). The behavior being studied in this experiment was the model in the ad running (behavior present) or simply standing (behavior absent).

It is believed that models in ads create the perception to audiences that they too can portray the same behavior as the model in the ad. This is especially true if the audience shares similar characteristic to the source. Therefore, vicariously learned behaviors affect the audiences' expectation capabilities of being able to replicate them due to social comparisons (Anderson,

2000). Nevertheless, due to the lack of research on product portrayal, the following research questions were developed.

RQ1: How does the presence or absence of behavior influence consumers' health outcomes?

RQ2: How does the presence or absence of behavior influence brand-related outcomes?

RQ3: Does the model's body shape moderate the effects of the presence or absence of behavior?

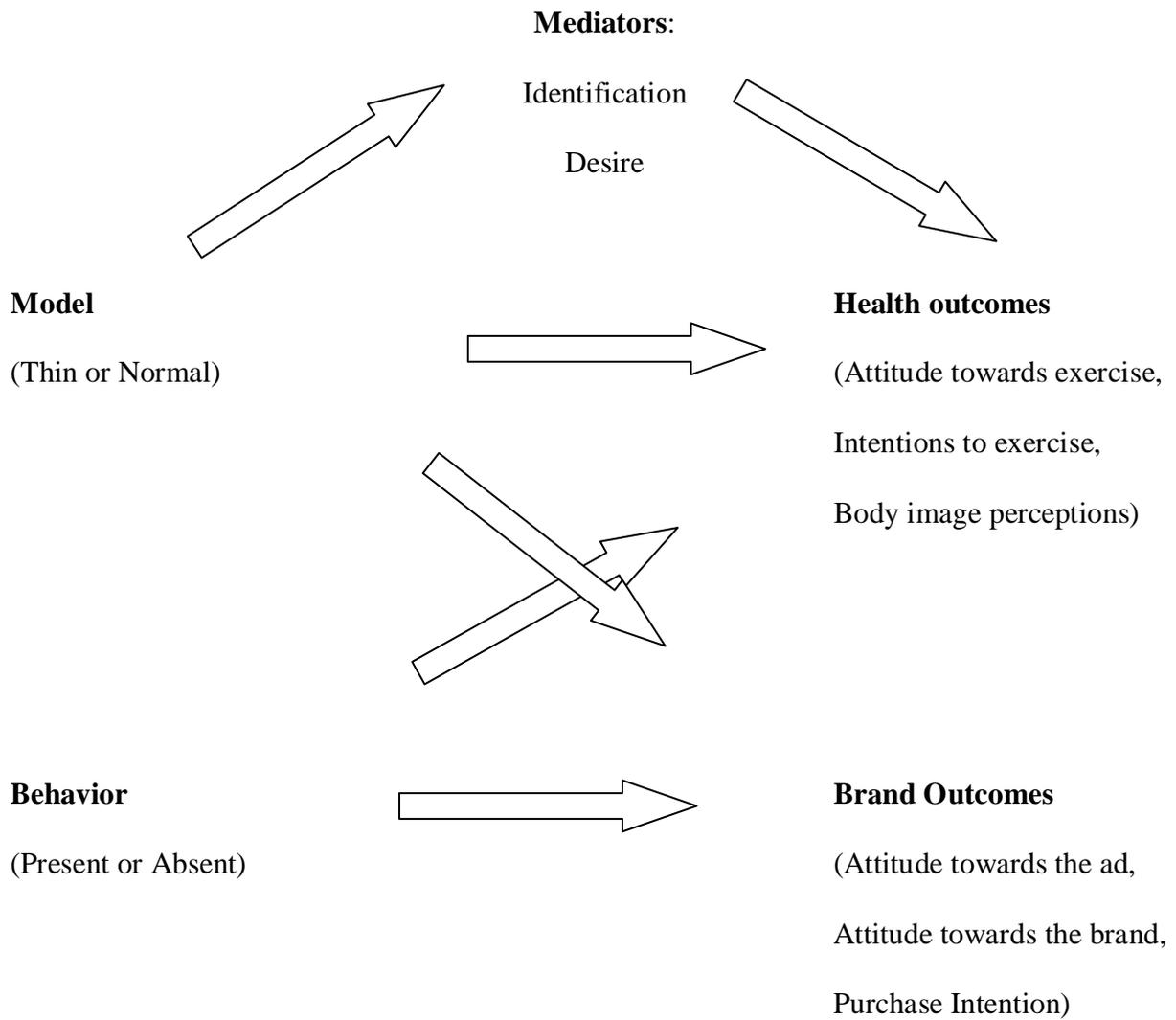


Figure 2-1. Hypotheses and research questions model

CHAPTER 3 PRETEST

This study was composed of a pretest and a main experiment. The methodology (procedure, design and measures) used and the results obtained in the pretest will be discussed in this chapter.

The pretest was conducted for several reasons. First, a brand had to be selected for the main experiment that participants viewed with neutral attitudes. This was important because it was essential that participants did not have previous positive or negative attitudes towards the brand. If so, this could affect the final results of the experiment because participants may have answered questions such as attitude towards the ad and purchase intentions solely based on how they felt about the brand and not the ad or model specifically. Also, the pretest was conducted in order to select ad stimuli that differed significantly from one another in terms of model size (one of the manipulations being tested). Next, the pretest was used to test the reliability of scales that had been modified from the original source in order to collect all the data necessary to test the hypotheses and research questions posited. Several scales had items added to them, such as the similarity scale (Osei, 2001) and the desirability and identification scales (Weintraub et al., 2006, Weintraub et al., 2007). Finally, it was used as a method of determining the effectiveness of alterations made to the advertisements. It was crucial that participants could not notice that the experimenter made changes in the size of the model to the stimuli since this could affect the validity of the study. Overall, the results of this pretest were used to determine if the brand, advertisements and scales could be used in the main experiment and if any revisions needed to be made.

Participants

Participants for the pretest were selected using the non-probability method of convenience or reliance on available subjects sampling (Babbie, 2007). One hundred and seventy-two students participated in the study from the College of Journalism and Communications.

To recruit student participants, the researcher visited classes during the Summer A period and informed students of the purpose of the experiment and the importance of their participation. They were informed of the times and location of the study. Sign up sheets with different time allotments were passed around and students signed up. Reminder emails were sent to all students the day before their participation. Most professors provided extra credit as an incentive for participation.

Participants ranged from 18 to 40 years of age; 88.40% of participants were between 18 and 22 years of age. Table 3-1 at the end of the chapter shows that the mean age of participants was 21.18 with a standard deviation of 2.14. However, because of the outliers there were in age groups, the mode is most critical in determining the most recurrent age, which remains at 21.

These participants were from the Advertising (36.60%), Public Relations (22.70%), Telecommunications (2.90%), Journalism (4.10%) and other departments (37.80%) including but not limited to Business, Economics, Engineering and Fitness and Nutrition. One hundred and eighteen participants were female (68.60%).

Operationalization

Similarity between the model in the ad and the participant in this study were conceptualized in terms of how similar/different participants were to the models in terms of body size. The results from the body size assessments were used to determine this similarity or difference, as it will be explained in the results section. In this study, body size, model size and size will be used interchangeably.

For this study, model size had 2 levels: thin or normal. A thin model is a woman whose body size is significantly smaller than the average woman being studied, in this case college females. A normal model is a woman whose body size closely resembles the body size of the participant and is significantly different from the thin model.

Stimuli

One of the purposes of conducting a pretest was to select the appropriate ad stimuli. Two model body sizes needed to be identified that were significantly different in terms of participants perceptions of size (thin versus normal), yet needed to be perceived similarly attractive. Also, two ad stimuli needed to be selected where one presented the model with the behavior present (running) and one with the behavior absent (not running).

Running was chosen as the behavior studied because it is a form of physical activity and it goes in accordance with the product shown in the ads, athletic shoes, as is an easy to identify physical activity. Also, most athletic shoes portray this behavior in their ads.

Six different stimulus ads were tested. Three different ads were of the model not engaged in the behavior being studied (the model wearing the shoe, but not running, only modeling). In the first ad, the model was shown standing in the track field wearing a tracksuit and looking up. In the second ad, the model was standing in a track field, leaning forward and almost stretching). In the third ad, the model was playing pool. Two stimulus ads of the model engaged in the behavior (the model running) were also tested. In the first, there was a smaller picture of the model running with a brown background. The second ad had a model in a blue suit running forward. There was also one control ad with the model absent showing only the brand and product that was tested.

It was important to test different ad stimulus for each condition (behavior absent versus present) because the ads were selected from magazines and the investigator needed to know

which of the ads presented the variables being studied more favorably. For example, since all ads had different models, the model with the behavior present and the model with the behavior absent both had to reflect similar perceived attractiveness.

Female models were chosen for this study because students from the College of Journalism and Communication at the University of Florida were selected to collect data and these students are predominantly female.

The ads were all for the same brand: Asics. None of them had any copy. This was digitally removed by the same person that digitally altered the models in terms of body sizes.

Of the ads with models, whether they were portraying the behavior of study or not, five different versions were tested where the model varied in size from extremely thin to normal, as determined by the investigator. One of the sizes, neutral model, remained unaltered because it would be used as a reference to what was originally presented and would be used as one way to differentiate what was thin versus what was normal in size. The model in each ad was digitally altered into four additional sizes, two of which were considered to be thin (thinnest (thin model 2) and thin (thin model 1)) and two of which were larger than the original model (large (normal model 1) and larger (normal model 2); seeking to assimilate the size of the participant). The stimuli can be seen in Appendix E. Table 3-2 shows how the ads were coded in order to facilitate the discussion of the results.

Procedure

To enlist student participation, the experimenter approached instructors of the Summer A period in order to visit classes. There, students were informed that the survey required them to visit the Research Lab at the College of Journalism and Communications where they would fill out a questionnaire on a computer program: MediaLab. MediaLab is a computer program used for the construction of questionnaires and experiments found in the College of Journalism and

Communication's Research Lab. The program was useful in the randomization of stimuli, timing of stimuli portrayed, providing SPSS data sheets, etc.

The questionnaire required participants to give their opinion on several athletic shoe brands and stimulus ads. One hundred and ninety-seven students signed up for different time periods during a one-week period (June 16 – June 20, 2008) to visit the Research Lab at Weimer Hall and take the 20-minute survey. Extra credit was provided by the instructors in most courses for students who took part of the study.

Arriving at the Research Lab, participants signed a sheet where they provided their names, student identification numbers, course from which they were recruited and instructor name. This was later used to inform instructors which students took part of the study in exchange for extra credit. During this study students could not be matched with the survey they completed.

Afterwards, participants selected a computer that already had a condition assigned and proceeded to answer the survey. Each participant viewed five different ad stimuli of the same size model plus an additional control stimulus for 15 seconds each. Time was subjectively selected by the experimenter since this provided enough time for the participant to view each ad carefully and not cause the participant to spend too much time waiting for the next section to appear. MediaLab randomized the order to the six stimuli ads. Participants answered questions regarding attitudes towards the brand, attitudes towards the ad, model attractiveness, similarity of the participant to the model, desire to look like the model, identification with the model, body size assessment, manipulation checks and participant information. When the data were collected, it was analyzed using computer software SPSS version 16.0.

Measures

The pretest was used to measure attitude towards the brand, attitude towards the ad, attractiveness of the model, model and participant similarity, desire to look like the model and identification with the model.

Attitude Towards the Brand

Participants were asked to rate seven brands which included Asics, New Balance, Nike, Reebok, Saucony, Mizuno and Fila. They were also asked to name an additional brand they could recall and rate it using the same scale.

Attitude towards the brand was measured using a scale by Gardner appropriately entitled Attitude towards the brand in the ad (1985). The scale consisted of four items in a seven point semantic differential scale. The adjectives used to answer how participants felt about the brands were bad/good, dislike quite a lot/ like quite a lot, unpleasant/pleasant and poor quality/ good quality. This scale is reported to have a Cronbach's Alpha of 0.96 (Gardner, 1985). After the pretest was conducted, it was found that the scale had a 1.00 Cronbach's alpha, meaning that there was a strong correlation between the items being tested.

Attitude Towards the Ad

Attitude towards the ad was measured using three items with a seven point semantic differential scale. The scale used the adjectives good/bad, interesting/uninteresting and like/dislike (Martin, Wentzel & Tomczak, 2008) to answer "Overall, what was your impression of this ad?" The scale had a reported Cronbach's alpha of 0.84 (Martin, Wentzel & Tomczak, 2008). After the pretest was conducted, it was found that the scale had a Cronbach's alpha of 0.93, meaning that there was a strong correlation between the items being tested.

Attractiveness

Attractiveness of the model was measured using three statements and a seven-point Likert-type scale. The adjectives used were strongly agree/strongly disagree (Bruner II & Hensel, 1998). The three statements read as follow:

- The model is attractive.
- In my opinion, the model is good looking.
- The model is pretty.

The scale had a reported Cronbach's alpha of 0.96 (Bruner II & Hensel, 1998). The items used in the scale were tested for reliability after the pretest was conducted and it was found that the scale had a Cronbach's alpha of 0.96, meaning that there was a strong correlation between the items being tested.

Similarity

Similarity between the model and the participant were measured using the Similarity scale by Osei (1991). This scale consisted of a question repeated several times but changing the last concept each time: "How similar are you to the character pictured in the ad on: overall lifestyle, cultural background, dress, appearance, and basic values". Participants answered using seven-point scales with the adjectives not at all similar/very similar. The original five items were used and "weight" was added to the question of the scale. Also, an explanation was added to the "dress" item to make sure that participants understood that the question was asking if they dressed similarly when performing comparable activities (refer to Appendix B). The scale has reported reliabilities of 0.86 to 0.91 (Osei, 1991). However, since an additional item ("weight") was included, reliability was calculated again. After the pretest was conducted, it was found that the scale had a Cronbach's alpha of 0.88, meaning that there was a strong correlation between the items being tested.

Desirability

Desirability was measured using a seven-point Likert type scale. Since no desirability scale was explicitly found, the scale was composed from questions used in a study by Weintraub et al. (2007). The items used were:

- The person in the ad looks like he or she is having fun.
- The person in the ad looks popular.
- The person in the ad looks powerful.

“The person in the ad looks like he or she is accepted by others” was added by the experimenter. The calculated Cronbach’s alpha for desirability showed that the items were strongly correlated with a measurement of 0.92.

Identification

Identification was measured using a seven-point Likert type scale. Since no identification scale was explicitly found, the scale was composed from questions used in studies by Weintraub et al. (2006 & 2007). The following statements were modified from the Weintraub et al. (2007) study:

- I want to be like the person in the ad.
- It would be fun to look like the person in the ad.
- The person in the ad does things I want to do.

The following statements were modified from the Weintraub et al. (2006) study:

- I wish I were as good looking as the person in the ad.
- I want to have as much fun as the person in the ad.

The Cronbach’s alphas found was of 0.93, which showed that the items were strongly correlated.

Body Mass Index

Participants provided estimates on how tall they perceived the model to be and how much they perceived the model to weigh. This was used to calculate the model’s BMI (Body Mass

Index) and the participants' BMI (which was calculated by acquiring similar participant information). The BMI was calculated using the equation 3-1.

$$\text{BMI} = (\text{Weight in pounds}/(\text{Height in inches}^2)) * 703 \quad (\text{About Adult BMI, 2008}) \quad (3-1)$$

Manipulation Checks

Several manipulation checks were conducted. Differences in model size were verified through the use of model body size assessments. Another manipulation check conducted was the establishment of whether or not the participant could notice that the stimuli had been digitally altered in size.

Body size assessment

The model's body size assessment was done by having the participant compare the model they had viewed in the ad to a scale (Contour Drawing Rating Scale) with nine models ranging in size from extremely thin to overweight. This scale was obtained from Thompson et al. (1999) and Thompson and Gray (1995). The purpose of using this scale was to see which size the participant associated the model with the most and to be able to distinguish if participants viewed significant differences between the sizes. Participants also compared their own body size to the models of the scale.

Digital alteration

To verify if participants could notice digital alterations in the ad stimuli, participants were asked "In your opinion, was the model in the ad digitally altered in size? Take into consideration only the size of the model and no other aspect of the ad." It was important that participants only took into consideration the model size since the stimuli had been altered in other ways. For example, all copy was removed and some was replaced with XXXXXX. Whether or not digital alterations were noticed was important because it could influence participants' responses as they

could figure out the purpose of the study and provide answers they thought the experimenter wanted.

Results

As previously mentioned, the pretest was conducted to 1) select a brand for the main experiment that participants viewed with neutral attitudes 2) select ad stimuli that differed significantly from one another in terms of model size and 3) test the reliability of scales.

Brand Selection

Table 3-3 shows the brands that were tested along with the means obtained from the scale measurements, the standard deviations, Cronbach's alphas and sample that rated each brand. The entire sample of 172 students rated the brands Asics, New Balance, Nike, Reebok, Saucony, Mizuno and Fila since these brands were provided in the questionnaire. Asics, Saucony, Mizuno and Fila were the only brands that had modes of four, means that ranged between 3.98 and 4.74, reflecting neutral attitudes.

The scale measuring attitude towards the brand was also used when participants were asked if they recalled any additional brands of running shoes not mentioned. Forty three percent of participants named additional brands and determined their likeability. Eight additional brands were mentioned, however, Adidas was the most frequently mentioned brand (by 67% participants that mentioned and rated additional brands).

An analysis of variance was performed on Asics, New Balance, Nike, Reebok, Saucony, Mizuno, Fila and Adidas. It was found that there was statistical significance, $F(1,171) = 497.76$, $p = 0.00$, between the brands. Post hoc comparisons demonstrated that Asics, New Balance, Nike, Saucony, Mizuno, Fila and Adidas had means that differed from each other ($p \leq 0.05$). Asics and Reebok, as well as Mizuno and Fila were the only brands that did not differ ($p > 0.05$) from one another.

Stimuli Selection

Results for the variable, attitude towards the ad could not be collected for each ad individually because there was an error when programming the variable into the computer questionnaire in MediaLab that was not discovered until after the questionnaire had been administered.

Model size analysis of all variables

Table 3-4 demonstrates how the size of the model differs for all the dependent variables measured in the pretest (desirability, attractiveness, similarity, identification, body size assessment of the model and the participant as well as the difference in body size assessment between the model and the participant). An analysis of variance with post hoc was conducted for each of the variables to determine if there were significant differences between the sizes presented.

In terms of desirability, ANOVA results showed that there were significant differences between the sizes, $F(4,167) = 4.56, p = 0.00$. Thin model 2 was significantly different from thin model 1, neutral model and normal model 1. Therefore, it was found to be less desirable than thin model 1, neutral model and normal model 1. The difference between all other paired comparisons was not significant. The means for desirability also demonstrated an inverted parabola shape between the means. As the size of the model increased, participants' desire to look like the model also increased. It climaxed at the neutral model size where it proceeded to decrease again.

For the variable, model attractiveness, ANOVA results showed that there were significant differences between the sizes, $F(4,167) = 9.38, p = 0.00$. Thin model 2 was significantly different from thin model 1, neutral model, normal model 1 and normal model 2. Means

demonstrated that thin model 2 was significantly less attractive than the other four model sizes presented. The difference between all other paired comparisons was not significant.

Model similarity to the participant was one of the variables that showed no statistical significance, $F(4,167) = 1.00, p = 0.41$, in the analysis of variance (ANOVA) conducted. Post hoc tests further demonstrated that all model sizes presented were viewed similar by the participants ($p > 0.05$). Therefore, regardless of the model size presented, participants did not find themselves similar to the models (means were below 4).

ANOVA demonstrated that identification to the model presented was also statistically significant, $F(4,167) = 5.05, p = 0.00$, between the sizes, meaning that there were differences between the sizes presented. Post hoc tests demonstrated that thin model 2 was significantly different ($p \leq 0.05$) from the neutral model and normal model 1. Participants identified themselves the most with the neutral model and normal model 1 than with thin model 2. However, neutral model and normal model 1 were not significantly different.

Body size assessments of the models were also statistically significant throughout the sizes presented, $F(4,167) = 66.81, p = 0.00$ in the analysis of variance (ANOVA). The post hoc test demonstrated that thin model 2 differed from the other four sizes presented. The body size assessment of thin model 2 was significantly lower than the body size assessment of thin model 1, neutral model, normal model 1 and normal model 2. Thin model 1 also differed ($p \leq 0.05$) from all other sizes. The body size assessment of thin model 1 was significantly larger than the assessment of thin model 2, but smaller than neutral model, normal model 1 and normal model 2. Neutral model was also significantly different ($p \leq 0.05$) from all model sizes. The body size assessment of neutral model was significantly larger than thin model 2 and thin model 1, but significantly smaller than normal model 1 and normal model 2. Normal model 1 was

significantly different from thin model 2, thin model 1 and neutral model therefore; the body size assessment of normal model 1 was significantly larger than thin model 2, thin model 1, and neutral model. Normal 2 was significantly different from thin model 2, thin model 1 and neutral model; therefore, the body size assessment of normal model 2 was significantly larger than thin model 2, thin model 1, and neutral model. The table also demonstrated a linear increase in the means as the size of the model became larger. Consequently, models in ads received a higher body size assessment as their size increased.

Body size assessment of the participant (self) was the other variable that ANOVA showed was not statistically significant $F(4,167) = 0.56, p = 0.69$ across model sizes. Regardless of the model size presented, body size assessment of the participants did not differ.

The difference between the body size assessment of the models and participants was calculated using the previous two variables. This variable was used to measure how similar or different the body size assessment of the model was from the participant. Analysis of variance showed that the differences between both body size assessments were significantly different $F(4,167) = 14.55, p = 0.00$ across model sizes. Post hoc tests showed that thin model 2 was different from all other model sizes. The body size assessment difference between the model and self was found to be significantly larger for thin model 2 than for thin model 1, neutral model, normal model 1 and normal model 2. Thin model 1 was significantly different from normal model 1 and normal model 2. The body size assessment difference between the model and self was found to be significantly larger for thin model 1 than for normal model 1 and normal model 2. No other paired comparisons were significantly different.

Finally, table 3-4 demonstrates whether there are significant differences within each size between the body size assessments of the model and the participant (self). A paired t-test

analysis showed that the body assessment of thin models 2 and 1, the neutral model and the normal model 1 were significantly different from the body assessments of the participant ($p \leq 0.05$). Normal model 2, however, was not significantly different from the participant ($p > 0.05$).

Body size assessment analysis

Tables 3-5 and 3-6 show how the sizes of the models differ for each of the five ads shown in the pretest by means of body size assessment of the model and attractiveness. These were the variables considered when selecting a size and ad for the main experiment. The body size assessment table was used to find differences between sizes for each ad and to find ads that were not significantly different within each model size presented. The attractiveness table was used to find sizes for each ad and ads for each size that did not differ from one another.

Table 3-5 presents differences in the body size assessments of the model between sizes for each ad and shows a linear increase in the means, similar to the increase seen in Table 3-4, for Ad 2, Ad 4, and Ad 5. Ad 2, Ad 4, and Ad 5 models received a higher body size assessment as the size of the model increased. It can also be seen that there are significant differences between the sizes for all ads (Ad 1: $F(4, 167) = 8.90, p = 0.00$; Ad 2: $F(4, 167) = 56.45, p = 0.00$; Ad 3: $F(4, 167) = 33.27, p = 0.00$; Ad 4: $F(4, 167) = 30.06, p = 0.00$; Ad 5: $F(4, 167) = 36.55, p = 0.00$).

Post hoc results demonstrated that for Ad 1, there were significant mean differences ($p \leq 0.05$) between the thin model 2 and both normal model 1 and normal model 2; thin model 1 and normal model 1 and normal model 2; and between the neutral model and normal model 1 and 2. The model in the track field with the behavior absent (Ad 1) had a significantly lower body size assessment for thin model 2 than for normal model 1 and normal model 2. It (Ad 1) also had a significantly lower body size assessment for thin model 1 than for normal model 1 and normal

model 2. This same ad had a significantly lower body size assessment for the neutral model than for normal model 1 or 2.

The model stretching with the behavior absent (Ad 2) demonstrated mean differences between thin model 2 and all four sizes; thin model 1 and all four sizes; neutral model and thin model 2, thin model 1 and normal model 2; normal model 1 from thin model 2 and thin model 1; and normal model 2 from thin model 2, thin model 1, and neutral model. Therefore, the body size assessment of thin model 2 was significantly lower than the rest of the model sizes. The body size assessment for thin model 1 was significantly higher than thin model 2, but significantly lower than the remaining three sizes. The body size assessment of the neutral model was significantly higher than thin model 2 and 1, but lower than normal model 1 and 2. The body size assessment of normal model 1 was significantly higher than thin model 2 and 1. Finally, the body size assessment of normal model 2 was significantly higher than thin model 2, thin model 1 and neutral model.

For the model playing pool (Ad 3) with the behavior absent, all model sizes were significantly different from one another. Neutral model and normal model 1 were the only model sizes not to differ significantly from one another. Therefore, the body size assessment of thin model 2 was significantly lower than the other for model sizes. The body size assessment of thin model 1 was significantly larger than thin model 2, but significantly lower than neutral model, normal model 1 and normal model 2. The body size assessment of neutral model was significantly higher than thin model 2 and thin model 1 but lower than normal model 2. The body size assessment of normal model 1 was significantly higher than thin model 1 and 2, but lower than normal model 2. Finally, the body size assessment of normal model 2 was significantly larger than all other four sizes.

Model sizes for the model running with the brown background (Ad 4) demonstrated that thin model 2 was significantly different from all other sizes. For this reason, it can be noted that thin model 2 was significantly lower than every other size in the body size assessment of the model. Thin model 1 was significantly different from thin model 2, normal model 1 and normal model 2. Thin model 1 was significantly higher than thin model 2, but significantly lower than normal model 1 and 2 in the model's body size assessment. Neutral model was significantly different from thin model 2 and normal model 2. The body size assessment of the neutral model was significantly higher than thin model 2 but lower than normal model 2. Normal model 1 was significantly different from thin model 2 and thin model 1. The body size assessment for normal model 1 was significantly higher than thin model 2 and 1. Normal model 2 was significantly different from thin model 2, thin model 1, and neutral model. The body size assessment of normal model 2 was significantly higher than thin model 2, thin model 1, and neutral model.

Finally, the models in Ad 5 (model running with blue suit) were significantly different from one another. Thin model 2 and thin model 1 were significantly different from all other four sizes. Neutral model was significantly different from thin model 2, thin model 1 and normal model 2. Normal model 1 was significantly different from thin model 2 and thin model 1. Normal model 2 was significantly different from thin model 2, thin model 1, and neutral model. Therefore, the body size assessment of thin model 2 was significantly lower than the other 4 model sizes. Meanwhile, the body size assessment of thin model 1 was significantly larger than thin model 2, but significantly lower than neutral model, normal model 1, and normal model 2. The body size assessment of neutral model was significantly larger than thin model 2 and 1, but significantly lower than normal model 2. Normal model 1's body size assessment was

significantly larger than thin model 2 and 1. Normal model 2's body size assessment was significantly larger than thin model 2, thin model 1 and neutral model.

Table 3-5 also shows how ads differ within each model size. Post hoc tests delineate the differences more clearly ($p \leq 0.05$). A linear decrease was noted between the means of the ads of the neutral model meaning that the body size assessment of the neutral model decreased through the ads.

Within thin model 2, analysis of variance showed that there were mean differences between the ads $F(4, 136) = 50.23, p = 0.00$. Ad 1 was significantly different from all four ads, as was Ad 2 and Ad 3. Therefore, the body size assessment of thin model 2 was significantly higher for Ad 1 than Ad 2, 3, 4 or 5. The body size assessment of Ad 2 was significantly lower than Ad 1, 3, 4, and 5. Ad 3 had a lower body size assessment for thin model 2 for Ad 1 and 4, but higher than Ad 2 and 5. Ad 4 was significantly different from Ad 1 and Ad 2. The table showed that Ad 4 had a significantly lower body size assessment than Ad 1, but significantly larger than Ad 2. The last ad, Ad 5 was significantly different from Ad 1 and Ad 2, meaning that Ad 5 had a significantly lower body size assessment than Ad 1, but significantly larger than Ad 2.

Thin model 1 also had significant mean differences between the sizes, $F(4, 136) = 12.55, p = 0.00$. Within thin model 1, post hoc tests demonstrated that Ad 1 was significantly different from Ad 2 through 5. Therefore, the body size assessment of the model in Ad 1 was significantly larger than Ad 2, 3, 4, or 5. The differences between all other paired comparisons were not significant.

For neutral model, analysis of variance demonstrated that there were no significant differences between the ads, $F(4, 132) = 1.95, p = 0.11$. Ad 5 was the only ad to show

significant differences from other ads for this model size. Ad 5 was significant different from Ad 1 and Ad 2. The body size assessment of Ad 5 was significantly lower than those of Ads 1 and 2.

For normal model 1, there were significant mean differences between the ads, $F(4, 132) = 8.95, p = 0.00$. Ad 1 was significantly different from all other four ads. Therefore, the body size assessment of Ad 1 was significantly larger than for Ad 2 through 5. Ad 2 was significantly different from Ad 1 and 3. This means that the body size assessment of Ad 2 is significantly lower than Ad 1, but significantly higher than Ad 3. Ad 3 was significantly different from all other 4 ads. The body size assessment of Ad 3 was significantly lower than Ad 1, 2, 4, and 5. Ad 4 was significantly different from Ad 1 and Ad 3. The body size assessment of Ad 4 is significantly lower than Ad 1, but significantly higher than Ad 3. Finally, Ad 5 was significantly different from Ad 1 and 3, meaning that the body size assessment of Ad 5 was significantly lower than Ad 1 and Ad 3.

The largest model size, normal model 2's analysis of variance showed that there were no significant mean differences between the sizes, $F(4, 132) = 1.51, p = 0.20$. Post hoc tests showed that there were significant differences between Ad 1 and Ad 5. The body size assessment of Ad 1 was significantly higher than Ad 5. No other significant paired comparisons were found.

Attractiveness analysis

Table 3-6 shows how the sizes of the models differed for each of the five ads shown in the pretest in terms of attractiveness. An inverted parabola (inverted "U" shape) was noticed between the means of the sizes for Ad 3, which climaxed in the neutral model. This meant that as the size of the model in Ad 3 increased, the model was found more attractive. This climaxes at the neutral model, the model found the most attractive. Afterwards, model attractiveness

decreased. The same shape and climax was seen for Ad 5. A similar shape was noticed for Ad 4, but this climaxed in thin model 1.

Between the five sizes presented for Ad 1 (woman in track field with behavior absent), analysis of variance showed that there were no significant differences between the sizes, $F(4, 167) = 1.69, p = 0.16$. Post hoc tests showed that there were no mean differences between the sizes for Ad 1, consequently, regardless of the model size, models were viewed similarly attractive. No other significant paired comparisons were found.

Between the sizes for Ad 2 (woman stretching with behavior absent), significant mean differences were found, $F(4, 167) = 18.33, p = 0.00$. Post hoc analysis determined that thin model 2 was significantly different from all other model sizes. Thin model 2 was significantly less attractive than thin model 1, neutral model, normal model 1 and normal model 2. However, no additional paired comparisons demonstrated to be significantly different.

In terms of Ad 3 (woman playing pool with behavior absent), analysis of variance showed that there mean differences between the sizes, $F(4, 167) = 3.33, p = 0.01$. Thin model 2 was significantly different from neutral model and normal model 1. Thin model 2 was found to be significantly less attractive than neutral model and normal model 1. No other significant paired comparisons were found.

In terms of Ad 4 (woman running with brown background), analysis of variance showed that there were mean differences between the sizes presented, $F(4, 167) = 5.52, p = 0.00$. Post hoc analysis demonstrated that thin model 2 was significantly different from thin model 1, neutral model and normal model 1, meaning that thin model 2 was significantly less attractive than those 3 model sizes. No other paired comparisons were found be significantly different.

Lastly, in terms of Ad 5 (woman running in blue suit), analysis of variance showed that there were mean differences between the sizes presented, $F(4, 167) = 9.94, p = 0.00$. Post hoc analysis demonstrated that thin model 2 was significantly different from the other 4 sizes presented. Thin model 2 was significantly less attractive than thin model 1, neutral model, normal model 1 and normal model 2. No other paired comparisons demonstrated significant differences.

Table 3-6 also shows how the ads differ for each model body sizes presented. In terms of thin model 2, analysis of variance demonstrated that there were significant mean differences between the ads, $F(4, 136) = 8.05, p = 0.00$. Post hoc analysis showed that Ad 1 was significantly different from Ad 2, Ad 4, and Ad 5. Therefore, Ad 1 was significantly more attractive than Ad 2, 4, and 5. Ad 2 was significantly different from all other sizes. This meant that Ad 2 was significantly less attractive than Ad 1, Ad 3, Ad 4, and Ad 5. Ad 3 was only significantly different from Ad 2 because it was found to be more attractive than Ad 2. Ad 4 was significantly different from Ad 1 and Ad 2 meaning that Ad 4 was significantly more attractive than Ad 2, but less attractive than Ad 1. Finally, Ad 5 was significantly different from Ad 1 and Ad 2. As a result, it was noted that Ad 5 was significantly more attractive than Ad 2, but less attractive than Ad 1.

In terms of thin model 1, analysis of variance demonstrated that there were significant mean differences between the ads, $F(4, 136) = 4.39, p = 0.00$. Post hoc analysis showed that Ad 1 was significantly different from all other ads presented in this size. From the table, it can be noticed that Ad 1 was significantly less attractive than Ad 2, Ad 3, Ad 4, and Ad 5. No other paired comparisons demonstrated significant differences between the ads.

When evaluating how the ads differed for neutral model, it was found that there were statistical differences between the sizes, $F(4, 132) = 5.50, p = 0.00$. The differences in Ad 1 were seen when compared to Ad 2, Ad 3, and Ad 5. Therefore, Ad 1 was significantly less attractive than Ads 2, 3, and 5. Ad 2 was significantly different from Ad 1, meaning that Ad 2 was significantly more attractive than Ad 1. Ad 3 was significantly different from Ad 1 and Ad 4. It was noted that Ad 3 was significantly more attractive than Ad 1 and Ad 4. Ad 4 was significantly different Ad 3 and Ad 5, meaning that it was less attractive than Ad 3 and Ad 5. Last of all, Ad 5 was significantly different from Ad 1 and Ad 4 and it was found that it was significantly more attractive than Ad 1 and Ad 4.

In terms of normal model 1, analysis of variance revealed mean differences between the ads shown, $F(4, 132) = 9.94, p = 0.00$. Ad 1 was significantly different from all other 4 ads. Therefore, Ad 1 was significantly less attractive than Ads 2 through 5. Ad 2 was significantly different from Ad 1 and Ad 4 noting that it was significantly more attractive than Ad 1 and Ad 4. Ad 3 was significantly different from Ad 1 and Ad 4 meaning that it was significantly more attractive than Ad 1 and Ad 4. Ad 4 was significantly different from Ad 1, Ad 2, and Ad 3. Ad 4 was significantly more attractive than Ad 1, but significantly less attractive than Ad 2 and Ad 3. Finally, Ad 5 was significantly different from Ad 1; it was significantly more attractive than Ad 1.

Last but not least, ads in the normal model 2 size also differed significantly, $F(4, 132) = 6.90, p = 0.00$. Post hoc tests revealed that Ad 1 was significantly different from Ad 2, Ad 3, and Ad 5 and it was observed that Ad 1 was significantly less attractive than Ad 2, Ad 3, and Ad 5. Ad 2 was significantly different from Ad 1 and Ad 4 and it was found that it was significantly more attractive than Ad 1 and Ad 4. Ad 3 was significantly more attractive than Ad 1. Ad 4 was

significantly different Ad 2 and Ad 5 meaning that Ad 4 was significantly less attractive than Ad 2 and Ad 5. Finally, Ad 5 was significantly different from Ad 1 and Ad 4. Ad 5 was significantly more attractive than Ad 1 and Ad 4.

Discussion

The first goal of the pretest was to select a brand for the main experiment that participants viewed with neutral attitudes. It was important that the brand selected in the main study held neither positive or negative attitudes by the participants because this could influence the way participants answered the questionnaire. In table 3-3, seven brands were tested in the pretest: Asics, New Balance, Nike, Reebok, Saucony, Mizuno and Fila and eight additional brands were mentioned. The means, standard deviation and Cronbach's alphas for each were calculated. New Balance, Nike, Adidas, Puma, Brooks, Pro Keds, Converse and Pastries were brands that obtained positive attitudes. Asics, Reebok, Saucony, Mizuno, Fila and Sketchers received relatively neutral attitudes. Kangaroo was the only brand with negative attitudes. Of all the brands tested in the analysis of variance conducted, Asics, Saucony, Mizuno and Fila were the only brands that had relatively neutral attitudes. They all differed from each other, $p \leq 0.05$ (except for Mizuno and Fila) in terms of attitude towards the brand.

Overall, 71.40% of participants said that the ads presented to them did not seem to have the model digitally altered in size. Because of the risks of reducing this percentage and eliminating the realistic view of the ads (and therefore reducing the external validity) or the fact that participants could tell they were created for the study, the brand Asics was selected to be used in the main study. Even though Asics had a higher overall mean for attitude towards the brand ($M = 4.74$, $SD = 1.35$) than Fila ($M = 3.98$, $SD = 1.27$), Mizuno ($M = 4.06$, $SD = 1.13$), and Saucony ($M = 4.30$, $SD = 1.20$), Asics still held relatively neutral attitudes. Also, because the ads had originally been selected from published magazines and not created for the purpose of

this study, a more realistic view was presented of the ad. It was not to be compromised by digitally altering the ad more such as changing the shoe the model was wearing to the new brand and having participants notice alterations. This increases the external validity of the study.

The second goal of this pretest was to select ad stimuli that would be used in the main experiment. Three ads were tested for the absence of behavior, two ads were tested for the presence of behavior, and one control ad was tested. The control ad presented positive attitudes with a mean score ($M = 5.38$, $SD = 1.30$) above the median of the scale, which are closer to adjectives such as good, interesting and like. Therefore, the control ad remained the same.

Similarity between the participant and the model has been conceptualized for this study as the resemblance between both parties in terms of body size. Therefore, the thin model size to be used in the main experiment was expected to be significantly different from the participant, while the normal model was expected to have a closer resemblance. Both sizes were also expected to be significantly different from each other. From the literature review presented, it was determined that it was essential to select a model size where the thin and normal models were considered similarly attractive in order to control for the effects of this variable on what is going to be measured in the main experiment.

When analyzing the data presented in Table 3-4, a linear increase existed between the sizes presented in terms of body size assessments of the models. This means that as the model size in the ads increased, the models to which they were compared to in the Contour Drawing Scale (the body size assessment) were also larger in size. The thin model sizes differed significantly ($p \leq 0.05$) from the normal model sizes. Therefore, the selection of either of the following sizes for the main experiment is a possible option:

- Thin model 2 and normal model 1
- Thin model 2 and normal model 2

- Thin model 1 and normal model 1
- Thin model 1 and normal model 2

Attractiveness of the model also had to be taken into consideration in order to control its influence on other variables in the main experiment. Therefore, a thin model and a normal model that were perceived to be similarly attractive had to be selected. Thin model 2 was eliminated as a possible option to represent the thin model in the main experiment because it was found to be significantly different from neutral model ($p = 0.00$), normal model 1 ($p = 0.00$) and normal model 2 ($p = 0.00$). However, thin model 1 was not found to be statistically different from either normal model 1 ($p = 0.92$) or normal model 2 ($p = 0.54$). A higher similarity between the sizes in terms of attractiveness is desired, consequently, the best option would be the selection of thin model 1 ($M = 4.96$, $SD = 0.81$) and either normal model 1 ($M = 4.78$, $SD = 0.84$) or normal model 2 ($M = 4.64$, $SD = 0.78$). Even though both normal model sizes are viable options due to the fact that they are not significantly different from one another, normal model 1 is considered a better option because it has a closer mean to thin model 1.

The selection of both of these sizes (thin model 1 and normal model 1) is also justified when looking at the data of table 3-4 in terms of body size assessments of the models. As previously mentioned, these model sizes were a viable option because participants could notice a significant difference in size between the two.

The selection of thin model 1 can be further supported when a significant difference was found between the body size assessments of the model and participant (self), when a paired t-test was conducted ($t = -5.97$, $p = 0.00$). This means that the participant and the model are not similar in size, which is what is expected of the thin model. Although the paired t-test between the body size assessment of the model and participant for normal model 1 did not reflect the expected results, statistical insignificance was desired in order to have a model that was more

similar to the participant in size with $t = -2.11$, $p = 0.04$. The selection of this size can be further explained by a study conducted by Cusumano and Thompson (1997) where a problem similar to the one encountered in this study was found. In the study, the investigators came across the predicament that when they asked participants to rate a larger size model (compared to the usual thin models in the media) by a 1-9 range of figures on a scale, models were rated at a smaller size than they actually were. This was because print advertisements usually portray thin sized women. There was an “inability to accurately match the body shape to the schematic figure drawings” (Cusumano and Thompson, 1997, p.717) in terms of the larger size models.

Following the selection of the model sizes for the main experiment was the selection of the ads to be used (an ad with the model not engaged in the behavior and an ad with the model engaged in the behavior). In each of the ads selected, the thin and normal model sizes had to differ in terms of body size assessment and be similar in terms of attractiveness. Table 3-5 demonstrates the results of the body size assessment of the model, shows that all ads differ in terms of the thin model 1 and normal model 1 with p-values of 0.05 or less. In table 3-6 (attractiveness), it can be noticed that all ads were similar for thin model 1 and normal model 1. However, it was Ad 2 ($p = 1.00$) and Ad 5 ($p = 0.96$) that had the closest similarity between the sizes selected.

Hence, it can be seen that in the selection on thin model 1, normal model 1, Ad 2, and Ad 5, the criteria previously established was met. As seen in table 3-1, thin model 1 ($M = 3.07$, $SD = 0.81$) and normal model 1 ($M = 4.32$, $SD = 0.59$) were significantly different ($p = 0.00$) from each other. This was very important because it established that the manipulation of the body size variable was successful. Also, attractiveness of the model did not vary between the two sizes (thin model 1: $M = 4.96$, $SD = 0.81$; normal model 1: $M = 4.78$, $SD = 0.84$) as the post hoc test of

the ANOVA of attractiveness demonstrated ($p = 0.92$). This was also important because previous research has established that attractiveness influences advertising effectiveness, behaviors and attitudes.

Also, when evaluating table 3-5 for the body size assessment of the model, it can be seen that thin model 1 and normal model 1 were statistically significant in difference for Ads 2 and 5 ($p = 0.00$). When looking within thin model 1, it can be seen that the ads did not differ, as expected. Ad 2 ($M = 2.89, SD = 1.13$) and Ad 5 ($M = 2.66, SD = 1.19$) obtained a p-value of 0.32 in post hoc analysis from the ANOVA conducted for this variable. When looking within normal model 1, it can also be seen that the ads did not differ. Ad 2 ($M = 4.32, SD = 1.25$) and Ad 5 ($M = 4.15, SD = 0.89$) obtained a p-value of 0.35 in post hoc analysis from the ANOVA conducted for this variable.

The final analysis of table 3-6 for attractiveness also revealed the desired results. Thin model 1 ($M = 5.10, SD = 1.32$) and normal model 1 ($M = 5.14, SD = 1.27$) were not statistically significant for Ad 2 ($p = 1.00$) nor Ad 5 ($p = 0.96$). Within thin model 1, Ad 2 ($M = 5.10, SD = 1.32$) and Ad 5 ($M = 5.23, SD = 1.32$) did not differ ($p = 0.63$). Within normal model 1, Ad 2 ($M = 5.14, SD = 1.27$) and Ad 5 ($M = 5.02, SD = 1.24$) did not differ ($p = 0.59$). Since no variability between ads and sizes was desired for the variable attractiveness, the ads selected fulfilled the required needs.

Other than the selection of model size and ad, the pretest was used to determine if any changes needed to be made to the scales and the stimuli. Reliabilities were calculated for all measures. However, the similarity scale was the only measure that was changed for the main experiment. Reliability was calculated and it was determined that the similarity in terms of

“cultural background” should be eliminated for the main experiment since it increased the reliability of the scale from 0.88 to 0.90.

Table 3-1. Participants' ages

Statistic	Age
Mean	21.18
Median	21
Mode	21
Standard deviation	2.14

Table 3-2. Coding of stimuli

Ad number		Size from smallest to largest				Ad
						Behavior absent
1	Thin model 2	Thin model 1	Neutral model	Normal model 1	Normal model 2	Woman in track field
2	Thin model 2	Thin model 1	Neutral model	Normal model 1	Normal model 2	Woman stretching
3	Thin model 2	Thin model 1	Neutral model	Normal model 1	Normal model 2	Woman playing pool
						Behavior present
4	Thin model 2	Thin model 1	Neutral model	Normal model 1	Normal model 2	Small image of woman running
5	Thin model 2	Thin model 1	Neutral model	Normal model 1	Normal model 2	Woman running in blue
6			Control			No model

Table 3-3. Participants' perceptions of the brands (Attitude towards the brand)

Brands	Mean	Standard deviation	Cronbach's alpha	Total responses
Asics	4.74	1.35	0.97	172
New Balance	5.63	1.15	0.94	172
Nike	6.18	0.97	0.91	172
Reebok	4.76	1.33	0.95	172
Saucony	4.30	1.20	0.97	172
Mizuno	4.06	1.13	0.97	172
Fila	3.98	1.27	0.95	172
Additional brands				
Adidas	6.05	1.09	0.98	64
Puma	5.89	1.14	0.94	22
Brooks	5.35	1.54	1.00	5
Kangaroo	2.25	N/A	N/A	1
Sketchers	4.75	N/A	N/A	1
Pro Keds	7.00	N/A	N/A	1
Converse	6.00	N/A	N/A	1
Pastries	6.00	N/A	N/A	1

Table 3-4. Differences between the size means for each dependent variable

	Size of the model										Between group	
	Thin model 2		Thin model 1		Neutral model		Normal model 1		Normal model 2		F	P-value
	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.		
Dsr	3.99	0.98	4.59	0.73	4.69	0.69	4.68	0.78	4.47	0.80	4.56	0.00
Attr	3.89	1.12	4.96	0.81	4.96	0.65	4.78	0.84	4.64	0.78	9.38	0.00
Sim	3.41	0.70	3.55	1.12	3.78	1.09	3.69	0.76	3.41	1.09	1.00	0.41
Id	3.09	1.02	3.54	1.14	4.06	1.17	4.05	1.00	3.37	1.22	5.05	0.00
BSAM	2.14	0.44	3.07	0.81	3.75	0.72	4.32	0.59	4.71	0.99	66.81	0.00
BSAS	5.03	1.69	4.51	1.40	4.94	1.41	4.85	1.42	4.88	1.77	0.56	0.69
BSAD	2.89	1.76	1.45	1.43	1.19	1.37	0.53	1.46	0.18	1.98	14.55	0.00
Within group	t	P-value	t	P-value	T	P-value	t	P-value	t	P-value		
BSAM and BSAD	-9.71	0.00	-5.97	0.00	-5.08	0.00	-2.11	0.04	-0.52	0.61		
Dsr - Desirability							35 participants viewed thin model 2					
Attr – Attractiveness							35 participants viewed thin model 1					
Sim - Similarity							34 participants viewed neutral model					
Id - Identification							34 participants viewed normal model 1					
BSAM - Body size assessment of model							34 participants viewed normal model 2					
BSAS - Body size assessment of self												
BSAD - Body size assessment of difference												

Table 3-5. Differences in model sizes and ads in terms of the body size assessments of the models

		Size												
		Thin model 2			Thin model 1		Neutral model		Normal model 1		Normal model 2		Between group	
Ad		Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	F	P-value	
BSAM	1	3.89	1.05	4.11	1.35	3.97	0.80	5.15	1.26	5.00	1.35	8.90	0.00	
	2	1.17	0.38	2.89	1.13	3.91	1.11	4.32	1.25	4.65	1.37	56.45	0.00	
	3	1.89	0.80	2.77	1.09	3.68	1.01	3.59	0.93	4.65	1.39	33.27	0.00	
	4	2.09	1.01	2.91	1.25	3.68	1.07	4.41	1.31	4.79	1.25	30.06	0.00	
	5	1.69	1.02	2.66	1.19	3.50	1.08	4.15	0.89	4.44	1.26	36.55	0.00	
Within group		F	P-value	F	P-value	F	P-value	F	P-value	F	P-value			
		50.23	0.00	12.55	0.00	1.95	0.11	8.95	0.00	1.51	0.20			

BSAM - Body size assessment of the model

35 participants viewed each thin model 2 ad
 35 participants viewed each thin model 1 ad
 34 participants viewed each neutral model ad
 34 participants viewed each normal model 1 ad
 34 participants viewed each normal model 2 ad

Table 3-6. Differences in model sizes and ads in terms of model attractiveness

		Size											
		Thin model 2		Thin model 1		Neutral model		Normal model 1		Normal model 2		Between group	
Ad		Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	F	P-value
Attr	1	4.61	1.31	4.24	1.60	4.40	1.31	3.90	1.30	3.97	1.08	1.69	0.16
	2	3.08	1.61	5.10	1.32	5.08	0.77	5.14	1.27	5.14	1.15	18.33	0.00
	3	4.26	1.61	5.04	1.18	5.28	1.13	5.19	1.27	4.69	1.50	3.33	0.01
	4	3.84	1.69	5.18	1.05	4.72	1.16	4.68	0.96	4.40	1.18	5.52	0.00
	5	3.66	1.59	5.23	1.32	5.30	0.95	5.02	1.24	5.00	1.12	9.94	0.00
Within group		F	P-value	F	P-value	F	P-value	F	P-value	F	P-value		
		8.05	0.00	4.39	0.00	5.50	0.00	9.94	0.00	6.90	0.00		

Attr – Attractive

35 participants viewed each thin model 2 ad
 35 participants viewed each thin model 1 ad
 34 participants viewed each neutral model ad
 34 participants viewed each normal model 1 ad
 34 participants viewed each normal model 2 ad

CHAPTER 4 MAIN EXPERIMENT

The methodology including procedure, design and measures used and the results obtained in the main experiment will be discussed in this chapter. The main experiment followed a 2 x 2 + 1 design and was composed of a post-manipulation test.

Participants

Participants for the main experiment were also selected using the non-probability method of convenience or reliance on available subjects sampling (Babbie, 2007). One hundred and seventy-four students participated in the study from the College of Journalism and Communications.

As in the pretest, to recruit student participants, the experimenter visited 6 undergraduate classes from the College of Journalism and Communications at the University of Florida. The investigator informed students about the study, the location and time availability. Sign-up sheets were passed around the class and collected at the end of the period. Reminder emails were sent to all students the day before their participation. All professors provided extra credit as an incentive for participation.

Participants ranged from 19 to 36 years of age; 95.40% of participants were between 19 and 22 years of age. Table 4-1 shows that the mean age of the participants was 20.92 ($SD = 1.64$). However, because of the outliers there were in age groups, the mode is most critical in determining the most recurrent age. Both the mode and the median showed that most participants were 21 years old, similar to the pretest participants. Eighty-six (86.80%) of these participants were female.

These participants were mostly from the Advertising department (98.30%). Seventy-two (72.40%) percent of participants were Caucasian, 16.10% were Hispanic, 5.20% were African American, 4% were Asian or Pacific Islanders, and 2.40% were of other ethnicities.

Design

As previously mentioned, the main experiment followed a 2 x 2 + 1 between subject factorial design and was composed of a post-manipulation test. The five ads (two with the behavior absent, two with the behavior present, and a control ad) selected in the pretest were the stimuli used to test the hypotheses posited. One of the ads with the behavior absent and one with the behavior present was of a thin woman, while the other two were of a woman with a normal size, as previously defined and determined in the pretest. The ads were coded according to table 4-2. None of the ads had any copy in them. Copy was replaced with XXXX. The stimuli can be seen in Appendix F.

Procedure

To enlist student participation, the experimenter requested permission from instructors and visited classes in the College of Journalism and Communications during the Fall 2008 semester. Students were informed that their participation was very important. They would be asked to view ads, provide their opinion and talk about their daily routines. They were also provided dates, times and the location (Weimer Hall 2052, Research Lab) of the study. The study was done at the Research Lab because it was carried out in the computer program MediaLab.

Two hundred and five students signed up for the study, but only 174 completed it during the Fall 2008 period. Upon arriving to the Research Lab, participants signed a sheet where they provided their names, student identification numbers, course from where they were recruited and instructor name. This was later used to inform instructors which students took part of the survey.

During this experiment students could not be matched with the questionnaire they completed. Instructors provided between 2 and 4 extra credit points to these students.

After sign up was completed, participants sat in front of a computer that already had a condition assigned and proceeded to answer the survey. Each participant viewed five ads; one target ad and four filler ads. These additional four filler ads were for Clorox, Scotch Brite, Peppid and Fresh Step (refer to Appendix F). The order of presentation of the ads was randomized by the computer program. After ads were viewed for 15 seconds (as subjectively assigned by the experimenter) each, participants answered questions regarding attitudes towards the ad, attitude towards the brand, purchase intention, exercise habits, attitude towards exercise, intentions to exercise, model attractiveness, similarity between the model and the participant, desire to look like the model, identification with the model, model's body size assessment, manipulation checks, participants body esteem, participants body weight and shape descriptions, and participant height, weight, size, and demographics. When the data were collected, it was analyzed using computer software SPSS version 16.0.

Measures

Measures Also Present in the Pretest

Several measures used in the pretest were used again in the main experiment. These measures included attitude towards the ad, attitude towards the brand, desirability, identification, attractiveness, similarity, and body size assessment (manipulation check). Reliability tests were conducted again in the post test analysis. Reliability tests for attitude towards the ad demonstrated that all the items were strongly correlated with a Cronbach's alphas of 0.81, as well as all the items for attitude towards the brand (Cronbach's alphas of 0.90), desirability (Cronbach's alphas 0.83), identification (Cronbach's alphas of 0.85), and attractiveness

(Cronbach's alphas 0.96). Reliability for similarity demonstrated moderately correlated items with a Cronbach's alphas of 0.77.

Like in the pretest, estimates of the models height and weight were collected. Participants were also asked if they believed the models were digitally altered in size.

Additional Measures

In the main experiment, five additional measures were used. These included attitude towards exercise, intentions to exercise, body image perceptions, purchase intentions, and participant information. Participants were also asked in an open ended question what the purpose of the study was.

Attitude towards exercise

Attitudes towards exercise was measured using the Attitude towards the act scale by Ajzen and Fishbein (1980). The semantic differential scales used a statement and seven items as a response with the following adjectives: bad/good, foolish/wise, harmful/beneficial, unpleasant/pleasant, unsafe/safe, punishing/rewarding, unsatisfactory/satisfactory. When used in the experiment, foolish/beneficial and unsafe/safe were reversely coded. This scale had a reported reliability of 0.85 to 0.95 in different studies (Ajzen & Fishbein, 1980). Reliability after the experiment showed strongly correlated items with a Cronbach's alphas of 0.82.

Intentions to exercise

Intentions to exercise was measured using the Behavioral Intention scale obtained in The Marketing Scales Handbook (Bruner II, James, & Hensel, 2005). This scale is made up of a statement and nine pairs of bipolar adjectives in a seven-point semantic differential scale (unlikely/likely, non-existent/existent, improbable/probable, impossible/possible, uncertain/certain, definitely would not/definitely would, not at all/very frequent, no chance/certain chance, and probably not/probably). This scale had a reported reliability of 0.80

to 0.93 in previous studies (Bruner II, James, & Hensel, 2005). When used in the experiment, improbable/probable, uncertain/certain, and not at all/very frequent were reversely coded. Reliability assessments conducted demonstrated that the items were strongly correlated with a Cronbach's alphas of 0.97.

Body image perceptions

Body image was measured using the body esteem and body shape self-schema. Body esteem was measured using the Body Esteem Scale for Adolescents and Adults. This scale was composed of 23 statements and a 5 point rating scale (1-never, 2-seldom, 3-sometimes, 4-often, 5-always). The statements asked for opinions on personal body image, what other people thought of the participant, aspects participants wanted to change of themselves, looks, weight, among some of the topics (Mendelson, White, & Mendelson, 1998; Thompson et al., 1999). The scale held strongly correlated items with a Cronbach's alphas of 0.84.

Body weight and shape self-schema was measured using the Body Weight and Shape Self-Schema Scale (Stein & Hedger, 1997; Thompson et al., 1999). This scale was composed of 1 question asking participants to state how much each word presented (7 words) described them and 5 point rating scale answers (1-not at all, 2- a little, 3-somewhat, 4-quite a bit, 5-very much). The words presented were: slim, physically fit, athletic, too fat, out-of-shape, ugly, good looking (Stein & Hedger, 1997; Thompson et al., 1999). The scale held moderately correlated items in the main experiment with a Cronbach's alphas of 0.76. No reverse coding was done to either scale since they both contained positive and negative statements.

Purchase intentions

Purchase intentions was measured using a scale obtained from an article by Martin, Wentzel, & Tomczak (2008). The scale involved a statement: "I plan on buying this product", in addition to three pairs of bipolar adjectives in a seven-point semantic differential scale

(likely/unlikely, probable/improbable, and definitely would/definitely would not). The scale had a reported reliability measurement of 0.92 (Martin, Wentzel, & Tomczak, 2008). However, for the experiment, probable/improbable was reversely recoded so that all the positive adjectives would not be grouped together. Reliability assessments showed that all items were strongly correlated (Cronbach's alphas of 0.90).

Participant information

Participant information gathered included exercise habits, demographic information and participant characteristics. Exercise habits were measured by asking participants how many hours a week they were involved in some type of physical activity and providing them multiple mutually exclusive responses from which they could select one. Demographic information collected included age, gender, ethnicities, and department. Finally, participant characteristics included participant height, weight and clothing size.

Results

This section shows the results of the data analysis conducted to test the hypotheses posited at the beginning of the study as well as the research questions. To evaluate the study's hypotheses and research questions, several variables were used. The categorical independent variables used were Model Size and Behavior. Both had two levels: thin and normal for Model Size; presence or absence for Behavior. The continuous dependent variables measured were divided into Health outcomes and Brand outcomes. Health outcome variables included attitude towards exercise, intentions to exercise, and body image perceptions. Body image perceptions were evaluated in terms of body esteem, and self-perceptions of body weight and shape. Brand outcomes included attitude towards the ad, attitudes toward the brand and purchase intentions.

Based on the presence of independent categorical variables and continuous dependent variables, the statistics used were analysis of variance (ANOVA) and analysis of covariance

(ANCOVA). All data were examined at a $p \leq 0.05$ level. ANOVA was used to examine the mean differences between both independent variables and each dependent variable and to see if there were any main effects or interaction effects present between the variables. ANCOVA was used to examine the effect of an additional variable on the mean differences. The additional variables that were evaluated were identification, desire, attractiveness, similarity, gender, hours of exercise, and body size assessment of the model.

Hypothesis 1

Hypothesis 1 stated that a normal model will be more likely than a thin model to positively influence health outcomes. This hypothesis examined the main effects of model size on three variables, including attitude towards exercise, intentions to exercise, and body image perceptions (body esteem and self-perceptions of body weight and shape).

Attitude towards exercise

ANOVA was conducted in order to detect significant differences between means as seen in tables 4-3 and 4-4. No main effect of model size, $F(1, 135) = 1.79, p = 0.18$, was found on attitude towards exercise. Therefore, a thin or a normal looking model had the similar impact on attitude towards exercise. Similar positive attitudes towards exercise, as seen in table 4-3, resulted when a model from either model size was shown (thin: $M = 6.38, SD = 0.68$; normal: $M = 6.23, SD = 0.64$). Hypothesis H1a, a normal looking model will be more likely than a thin model to positively influence attitudes towards exercise, was not supported.

Intentions to exercise

An analysis of variance (ANOVA) was conducted in order to find significant differences between means. No main effect of model size, $F(1, 135) = 0.92, p = 0.34$ (table 4-7), was found on intentions to exercise. Therefore, a thin or a normal looking model had a similar impact on intentions to exercise. Similar positive intentions to exercise, as seen in table 4-6, were found for

both model sizes (thin: $M = 6.13$, $SD = 1.15$; normal: $M = 5.93$, $SD = 1.29$). Hypothesis H1b (a normal looking model will be more likely than a thin model to positively influence intentions to exercise) was not supported.

Body image perceptions

This concept was analyzed using two variables: body esteem and body weight and shape schema. ANOVA was conducted for both variables (please refer to tables 4-9, 4-10, 4-12, and 4-13). It was found that model size had no main effect, $F(1, 135) = 1.11$, $p = 0.30$, on body esteem, nor on body weight and shape schema, $F(1, 135) = 0.00$, $p = 0.97$. Therefore, a thin or a normal looking model had the same impact on body image perceptions. Participants had neither positive nor negative body esteem issues after viewing a thin model ($M = 3.38$, $SD = 0.43$) or a normal model ($M = 3.46$, $SD = 0.48$). Participants also had neither positive nor negative attitude as to how they felt about themselves after viewing a thin model ($M = 3.69$, $SD = 0.62$) or a normal model ($M = 3.70$, $SD = 0.61$). Therefore, hypothesis H1c, a normal model will be more likely than a thin model to positively influence self-perceptions of body image, was not supported.

Hypothesis 2

Hypothesis 2 stated that a normal looking model will be more likely than a thin model to positively influence brand-related outcomes. This hypothesis examined the main effects of model size on three variables, including attitude towards the ad, attitude towards the brand, and purchase intentions.

Attitude towards the ad

ANOVA was conducted in order to detect significant differences between means. No main effect of model size, $F(1, 135) = 0.93$, $p = 0.34$ (table 4-16), was found on attitude towards the ad. Therefore, a thin or a normal looking model had a similar impact on attitude towards the ad.

Similar relatively positive attitudes towards the ad, as seen in table 4-15, resulted when a model from either size was shown (thin: $M = 4.68$, $SD = 1.23$; normal: $M = 4.87$, $SD = 1.05$).

Hypothesis H2a, a normal looking model will be more likely than a thin model to positively influence attitudes towards the ad, was not supported.

Attitude towards the brand

ANOVA was conducted in order to detect significant differences between means. No main effect of model size, $F(1, 135) = 0.39$, $p = 0.53$ (table 4-19), was found on attitude towards the brand. Therefore, a thin or a normal looking model had a similar impact on attitude towards the brand. Similar positive attitudes towards the brand (table 4-18) resulted when a model from either size was shown (thin: $M = 4.93$, $SD = 0.83$; normal: $M = 5.03$, $SD = 0.93$). Hypothesis H2b, a normal looking model will be more likely than a thin model to positively influence attitudes towards the brand, was not supported.

Purchase intentions

ANOVA was conducted in order to detect significant differences between means. No main effect of model size, $F(1, 135) = 0.06$, $p = 0.81$ (table 4-21), was found on purchase intentions. Therefore, a thin or a normal looking model had a similar impact on purchase intentions. Similar low-neutral purchase intentions (table 4-20) resulted when a model from either size was shown (thin: $M = 3.72$, $SD = 1.44$; normal: $M = 3.78$, $SD = 1.43$). Hypothesis H2c, a normal looking model will be more likely than a thin model to positively influence purchase intentions, was not supported.

Hypothesis 3

From hypothesis 1 and hypothesis 2, it can be seen that model size did not have any significant effect on the dependent variables (attitude towards exercise, intentions to exercise, body image perceptions, attitude towards the ad, attitude towards the brand, purchase intentions).

From research question 1 and research question 2, which are discussed further on, it can be seen that behavior did not have any significant effect on the dependent variables (attitude towards exercise, intentions to exercise, body image perceptions, attitude towards the ad, attitude towards the brand, purchase intentions). Therefore, the mediating effect of identification was not tested. Hypothesis 3, the effects of the model will be mediated by the extent to which users identify themselves with the model, was not supported.

Hypothesis 4

From hypothesis 1 and hypothesis 2, it can be seen that model size did not have any significant effect on the dependent variables (attitude towards exercise, intentions to exercise, body image perceptions, attitude towards the ad, attitude towards the brand, purchase intentions). From research question 1 and research question 2, which are discussed further on, it can be seen that behavior did not have any significant effect on the dependent variables (attitude towards exercise, intentions to exercise, body image perceptions, attitude towards the ad, attitude towards the brand, purchase intentions). Therefore, the mediating effect of desire to look like the model was not tested. Hypothesis 4, the effects of the model will be mediated by the extent to which users desire to look like the model, was not supported.

Research Question 1

Research question 1 inquired: How does the presence or absence of behavior influence consumers' health outcomes? This research question examined the main effects of behavior on three variables, including attitude towards exercise, intentions to exercise, and body image perceptions (body esteem and self-perceptions of body weight and shape).

Attitude towards exercise

ANOVA was conducted in order to detect significant differences between means (table 4-4). No main effect of behavior, $F(1, 135) = 1.03, p = 0.31$ was found on attitude towards

exercise. Therefore, a model that was running (engaged in the behavior) or a model that was not engaged in the behavior had a similar impact on attitude towards exercise. Similar positive attitudes towards exercise resulted when a model engaged in the behavior ($M = 6.25, SD = 0.68$) was shown and when a model not engaged in the behavior ($M = 6.36, SD = 0.65$) was shown.

Intentions to exercise

ANOVA was conducted in order to detect significant differences between means. Table 4-7 demonstrates that no main effect of behavior, $F(1, 135) = 0.41, p = 0.53$ was found on intentions to exercise. Therefore, a model that was running (engaged in the behavior) or a model that was not engaged in the behavior had a similar impact on intentions to exercise. Similar positive intentions to exercise resulted when a model engaged in the behavior ($M = 5.96, SD = 1.25$) was shown and when a model not engaged in the behavior ($M = 6.10, SD = 1.20$) was shown.

Body image perceptions

This concept was analyzed using two variables: body esteem and body weight and shape schema. ANOVA was conducted for both variables as seen in tables 4-10 and 4-13. It was found that behavior had no main effect, $F(1, 135) = 0.49, p = 0.49$ on body esteem, nor on body weight and shape schema, $F(1, 135) = 0.05, p = 0.82$. Therefore, a model engaged in the behavior and a model not engaged in the behavior had a similar impact on body image perceptions. Participants had neither positive nor negative (neutral) body esteem issues after viewing a model engaged in the behavior ($M = 3.39, SD = 0.47$) or a model not engaged in the behavior ($M = 3.44, SD = 0.44$). Participants also had neither positive nor negative attitude as to how they felt about themselves after viewing a model engaged in the behavior ($M = 3.68, SD = 0.46$) or a model not engaged in the behavior ($M = 3.71, SD = 0.67$).

Research Question 2

Research question 2 inquired: How does the presence or absence of behavior influence consumers' brand-related outcomes? This research question examined the main effects of behavior on three variables, including attitude towards the ad, attitude towards the brand, and purchase intentions.

Attitude towards the ad

ANOVA was conducted in order to detect significant differences between means, as seen in table 4-16. No main effect of behavior, $F(1, 135) = 0.01, p = 0.94$ was found on attitude towards the ad. Therefore, a model that was running (engaged in the behavior) or a model that was not engaged in the behavior had a similar impact on attitude towards the ad. Similar positive attitudes towards the ad resulted when a model engaged in the behavior ($M = 4.78, SD = 1.31$) was shown and when a model not engaged in the behavior ($M = 4.77, SD = 0.96$) was shown.

Attitude towards the brand

ANOVA was again conducted in order to detect significant differences between means. Table 4-19 shows that no main effect of behavior, $F(1, 135) = 0.15, p = 0.70$ was found on attitude towards the brand. Therefore, a model that was running (engaged in the behavior) or a model that was not engaged in the behavior had a similar impact on attitude towards the brand. Similar positive attitudes towards the brand resulted when a model engaged in the behavior ($M = 4.95, SD = 0.94$) was shown and when a model not engaged in the behavior ($M = 5.01, SD = 0.82$) was shown.

Purchase intentions

Analysis of variance was again conducted in order to detect significant differences between means. Table 4-21 shows that no main effect of behavior, $F(1, 135) = 0.00, p = 0.96$ was found on purchase intentions. Therefore, a model that was running (engaged in the behavior) or a

model that was not engaged in the behavior had a similar impact on purchase intentions. Similar low-neutral purchase intentions resulted when a model engaged in the behavior ($M = 3.72$, $SD = 1.42$) was shown and when a model not engaged in the behavior ($M = 3.76$, $SD = 1.45$) was shown.

Research Question 3

Research question 3 inquired whether the model's body size moderated the effects of the presence or absence of behavior. This question was analyzed for all dependent variables as will be presented.

Attitude towards exercise

Analysis of variance was conducted and results indicated that an interaction effect between model size and behavior that was marginally significant, $F(1, 135) = 3.71$, $p = 0.06$ (table 4-4) was found on attitudes towards exercise. Model size moderated the effects of the presence and absence of behavior. Post hoc tests demonstrated that when a thin model was shown there were statistically significant mean differences, $p = 0.04$, between the presence ($M = 6.22$, $SD = 0.85$) and absence ($M = 6.54$, $SD = 0.42$) of behavior. When a normal sized model was shown, no significantly different mean differences, $p = 0.52$, between the presence ($M = 6.28$, $SD = 0.47$) and absence ($M = 6.18$, $SD = 0.77$) of behavior were found. Therefore, participants had a better attitude towards exercise when a thin model not exhibiting the behavior was shown.

Intentions to exercise

ANOVA was conducted in order to see if model size moderated the effects of behavior. Table 4-7 shows that no interaction effects, $F(1, 135) = 0.00$, $p = 0.98$, was found. The lack of interaction between model size and behavior suggests that model size did not moderate the effects of the presence or absence of behavior for intentions to exercise.

Body image perceptions

ANOVA was also conducted in order to see if model size moderated the effects of behavior for body esteem and body weight and shape schema as seen in tables 4-10 and 4-13. No interaction effects, $F(1, 135) = 1.00, p = 0.32$ for body esteem nor for body weight and shape schema, $F(1, 135) = 0.06, p = 0.82$ were found. Therefore, for body image perceptions, it can be suggested that model size did not moderate the effects of the presence or absence of behavior.

Attitude towards the ad

Table 4-16 shows a marginally significant interaction effect between the two independent variables was found on attitude towards the ad, $F(1, 135) = 3.60, p = 0.06$. Post hoc test did not show any significant differences between the presence and absence of behavior when a thin or normal looking model were shown. Therefore, the models body size does not seem to moderate the effects of the presence or absence of behavior for attitude towards the ad.

However, post hoc tests did show that there were mean differences ($p = 0.04$) between a thin ($M = 4.50, SD = 1.36$) and normal ($M = 5.06, SD = 1.21$) models when the behavior was present in the ad. Nonetheless, no mean differences between a thin ($M = 4.86, SD = 1.08$) and normal ($M = 4.68, SD = 0.83$) model when the behavior was absent in the ad were noted. A normal model with the behavior present received better attitudes towards the ad. Based on attitude towards the ad, model size did not moderate the effects of behavior.

Attitude towards the brand

ANOVA was conducted in order to determine if model size moderated the effects of behavior. Table 4-19 shows that no interaction effect, $F(1, 135) = 0.19, p = 0.66$, was found. The lack of interaction between model size and behavior suggests that model size did not moderate the effects of the presence or absence of behavior on attitude towards the brand.

Purchase intentions

ANOVA was conducted in order to see if model size moderated the effects of behavior. No interaction effect (table 4-21), $F(1, 135) = 0.08, p = 0.78$, was found between the two variables. The lack of interaction between model size and behavior suggests that model size did not moderate the effects of the presence or absence of behavior on purchase intentions.

Further Analysis with Additional Variables

Exploratory analysis was conducted by including additional variables as covariates in the analysis of variance testing model. These covariates included identification, desire, attractiveness, similarity, gender, hours exercised, and body size assessment of the model. This was done to examine any significant effects these 7 variables might have on each of the dependent variables. After the significant covariates for each dependent variable were identified, ANCOVA was run again using only the significant variables that were found in the previous test. The results are reported below.

Attitude towards exercise

An exploratory analysis of covariance (table 4-5) for attitude towards exercise was conducted with seven variables including identification, desire, attractiveness, similarity, gender, hours exercised, and body size assessment of the model. Significant covariates (attractiveness $F(1, 128) = 5.97, p = 0.02$ and hours of exercise $F(1, 128) = 23.82, p = 0.00$) were then run again in another analysis of covariance. It was found that both variables (attractiveness $F(1, 133) = 6.11, p = 0.02$ and hours of exercise $F(1, 133) = 30.49, p = 0.00$) influenced the results of model size and behavior on attitudes towards exercise. Attractiveness and hours of exercise increased the effect that model size had on attitude towards exercise, leading to a marginally significant main effect of model size, $F(1, 133) = 3.61, p = 0.06$, on attitudes towards exercise. A thin model ($M = 6.38, SD = 0.68$) was preferred over a normal model ($M = 6.23, SD = 0.64$) when

attractiveness and hours of exercise influenced the results. No main effect, $F(1, 133) = 0.29, p = 0.59$ of behavior was found, especially since attractiveness and hours of exercise decreased the main effect of behavior.

Attractiveness and hours of exercise increased the interaction effect that model size and behavior had on attitude towards exercise. Therefore, an interaction effect between model size and behavior on attitudes towards exercise was found, $F(1, 133) = 3.85, p = 0.05$. Post hoc tests demonstrated that there were no mean differences between the presence ($M = 6.22, SD = 0.85$) and absence ($M = 6.54, SD = 0.42$) of behavior when a thin model was shown. Also, there were no mean differences between the presence ($M = 6.28, SD = 0.47$) and absence ($M = 6.18, SD = 0.78$) of behavior when a normal looking model was shown. There were also no mean differences between a thin ($M = 6.22, SD = 0.85$) and normal model ($M = 6.28, SD = 0.47$) when the behavior was present. However, there was a difference between thin ($M = 6.54, SD = 0.42$) and normal ($M = 6.18, SD = 0.78$) models when the behavior was absent ($p = 0.01$). When the model with the behavior absent was shown, participants had better attitudes towards exercise when the thin model shown than when a normal model was shown.

Intentions to exercise

An exploratory analysis of covariance for intentions to exercise (table 4-8) was conducted with the seven covariates: identification, desire, attractiveness, similarity, gender, hours exercised, and body size assessment of the model. The only significant covariate (hours of exercise, $F(1, 128) = 78.64, p = 0.00$) was then run again in another analysis of covariance. Hours of exercise, $F(1, 134) = 90.57, p = 0.00$, was found influence the effects of model size and behavior on intentions to exercise. Nonetheless, no main effect of model size, $F(1, 134) = 2.09, p = 0.15$, nor behavior, $F(1, 134) = 0.57, p = 0.45$, as well as no interaction effect, $F(1, 134) = 0.00, p = 0.96$, was found. The influence of hours of exercise increased the main effect of model

size on intentions to exercise. The influence of hours of exercise also increased the main effect of behavior on intentions to exercise. Finally, the influence of hours of exercise also increased the interaction effect between model size and behavior on intentions to exercise. None of them, however, were statistically significant.

Body image perceptions

An exploratory analysis of covariance was conducted with the 7 covariates (e.g., identification, desire, attractiveness, similarity, gender, hours exercised, and body size assessment of the model) for both body esteem (table 4-11) and body weight and shape schema (table 4-14). The only significant covariate for body esteem, similarity ($F(1, 128) = 27.32, p = 0.00$), was then run again in another analysis of covariance. Similarity, $F(1, 133) = 23.88, p = 0.00$, was found to be a significant covariate and therefore influenced the effects of the independent variables on body esteem. The influence of similarity decreased the main effect of model size, main effect of behavior, as well as the interaction effect between model size and behavior on body esteem. No main effect of model size, $F(1, 133) = 0.68, p = 0.41$, nor behavior, $F(1, 133) = 0.13, p = 0.72$, as well as no interaction effect, $F(1, 133) = 0.45, p = 0.50$, was found.

The significant covariates for body weight and shape schema (attractiveness $F(1, 128) = 4.81, p = 0.03$, similarity $F(1, 128) = 24.36, p = 0.00$ and hours exercised $F(1, 128) = 13.40, p = 0.00$) were then run again in another analysis of covariance. Since attractiveness of the model was not statistically significant, $F(1, 132) = 2.28, p = 0.13$, another ANCOVA was run with similarity and hours of exercise as covariates. Similarity, $F(1, 133) = 19.90, p = 0.00$, was found to influence the effects of the model on body weight and shape schema. Hours exercised, $F(1, 133) = 16.28, p = 0.00$, was also statistically significant. However, there was no main effect of model size $F(1, 133) = 0.12, p = 0.74$, behavior $F(1, 133) = 0.60, p = 0.44$, nor interaction effect

$F(1, 133) = 0.02, p = 0.88$ between the two (model size and behavior) on body weight and shape self-schema. The influence of similarity and hours of exercise increased the main effect of model size on body weight and shape schema. The influence of similarity and hours of exercise also increased the main effect of behavior on body weight and shape schema. Finally, the influence of similarity and hours of exercise decreased the interaction effect between model size and behavior on body weight and shape schema. None of them, however, were statistically significant.

Attitude towards the ad

An exploratory analysis of covariance was conducted with the 7 covariates (e.g., identification, desire, attractiveness, similarity, gender, hours exercised, and body size assessment of the model) as seen in table 4-17. The only marginally significant covariate, identification ($F(1, 128) = 3.63, p = 0.06$) was then run again in another analysis of covariance. Identification with the model was statistically significant, $F(1, 134) = 6.49, p = 0.01$, and therefore was an influencing variable for attitude towards the ad. The influence of identification decreased the main effect of model size on attitude towards the ad. The influence of identification decreased the main effect of behavior on attitude towards the ad. Nonetheless, the influence of identification increased the interaction effect between model size and behavior on attitude towards the ad.

There was no main effect of model size $F(1, 134) = 0.33, p = 0.57$, nor behavior $F(1, 134) = 0.00, p = 0.97$. However, interaction effect $F(1, 134) = 4.08, p = 0.05$ between model size and behavior was found on attitude towards the ad. Post hoc tests did not show any mean differences between the conditions.

Purchase intentions

An exploratory analysis of covariance was conducted with seven covariates (e.g., identification, desire, attractiveness, similarity, gender, hours exercised, and body size assessment of the model) as seen in table 4-22. The only significant covariate, hours of exercise ($F(1, 128) = 5.41, p = 0.02$) was then run again in another analysis of covariance. Hours of exercise was statistically significant, $F(1, 134) = 6.88, p = 0.01$, and therefore was a confounding variable for purchase intentions. The influence of hours of exercise decreased the main effect of model size on purchase intentions. The influence of hours of exercise increased the main effect of behavior on purchase intentions. The influence of hours of exercise increased the interaction effect between model size and behavior on purchase intentions. However, there was no main effect of model size $F(1, 134) = 0.04, p = 0.85$, nor behavior $F(1, 134) = 0.15, p = 0.70$. No interaction effect $F(1, 134) = 0.10, p = 0.76$ between model size and behavior was found on purchase intentions.

Manipulation check

Table 4-23 demonstrates the results for manipulation checks conducted. A thin model that differed in size for the normal looking model was desired for this study. Analysis of variance conducted showed that the thin model ($M = 3.14, SD = 1.05$) was in fact perceived differently from the normal looking model ($M = 3.60, SD = 1.54$), $F(1, 137) = 7.37, p = 0.01$. A thin model that differed significantly from the participant was also desired. Paired t-test analysis showed that this manipulation was also significant since the thin model ($M = 3.14, SD = 1.05$) was different in body size from the participant that viewed the thin model ($M = 4.83, SD = 1.44$), $t = 7.58, p = 0.00$. However, the normal model was also found to be significantly different, $t = 5.23, p = 0.00$ in size from the participant ($M = 4.71, SD = 1.54$) that viewed the normal looking model.

Table 4-1. Participants' age

Statistics	Age
Mean	20.92
Median	21
Mode	21
Standard deviation	1.64

Table 4-2. Coding main study stimuli

	Running	Not running	Control
Thin model	1	3	5
Normal model	2	4	

Table 4-3. Means for attitude towards exercise

Model size	Behavior	Mean	Std. Deviation	N
Thin	Absent	6.54	0.42	35
	Present	6.22	0.85	35
	Total	6.38	0.68	70
Normal	Absent	6.18	0.78	34
	Present	6.28	0.47	35
	Total	6.23	0.64	69
Total	Absent	6.36	0.65	69
	Present	6.25	0.68	70
	Total	6.31	0.66	139

Table 4-4. ANOVA test on attitude towards exercise

Source	DF	F	P-value
Model size	1	1.79	0.18
Behavior	1	1.03	0.31
Model size * Behavior	1	3.71	0.06

Table 4-5. ANCOVA test on attitude towards exercise with other variables as covariates

Source	DF	F	P-value
Attractiveness	1	6.11	0.02*
Hours exercised	1	30.49	0.00*
Model size	1	3.61	0.06
Behavior	1	0.29	0.59
Model size * Behavior	1	3.85	0.05*

* $p \leq 0.05$

Table 4-6. Means for intentions to exercise

Model size	Behavior	Mean	Std. Deviation	N
Thin	Absent	6.20	1.13	35
	Present	6.06	1.19	35
	Total	6.13	1.15	70
Normal	Absent	5.99	1.28	34
	Present	5.87	1.32	35
	Total	5.93	1.29	69
Total	Absent	6.10	1.20	69
	Present	5.96	1.25	70
	Total	6.03	1.22	139

Table 4-7. ANOVA test on intentions to exercise

Source	DF	F	P-value
Model size	1	0.92	0.34
Behavior	1	0.41	0.53
Model size * Behavior	1	0.00	0.98

Table 4-8. ANCOVA test on intentions to exercise with other variables as covariates

Source	DF	F	P-value
Hours exercised	1	90.57	0.00*
Model size	1	2.09	0.15
Behavior	1	0.57	0.45
Model size * Behavior	1	0.00	0.96

* $p \leq 0.05$

Table 4-9. Means for body esteem

Model size	Behavior	Mean	Std. Deviation	N
Thin	Absent	3.44	0.49	35
	Present	3.31	0.37	35
	Total	3.38	0.43	70
Normal	Absent	3.45	0.39	34
	Present	3.47	0.56	35
	Total	3.46	0.48	69
Total	Absent	3.44	0.44	69
	Present	3.39	0.47	70
	Total	3.42	0.46	139

Table 4-10. ANOVA test on body esteem

Source	DF	F	P-value
Model size	1	1.11	0.30
Behavior	1	0.49	0.49
Model size * Behavior	1	1.00	0.32

Table 4-11. ANCOVA test on body esteem with other variables as covariates

Source	DF	F	P-value
Similarity	1	23.88	0.00*
Model size	1	0.68	0.41
Behavior	1	0.13	0.72
Model size * Behavior	1	0.45	0.50

* $p \leq 0.05$

Table 4-12. Means for body weight and shape

Model size	Behavior	Mean	Std. Deviation	N
Thin	Absent	3.72	0.71	35
	Present	3.67	0.53	35
	Total	3.69	0.62	70
Normal	Absent	3.70	0.62	34
	Present	3.70	0.61	35
	Total	3.70	0.61	69
Total	Absent	3.71	0.67	69
	Present	3.68	0.56	70
	Total	3.70	0.62	139

Table 4-13. ANOVA test on body weight and shape

Source	DF	F	P-value
Model size	1	0.00	0.97
Behavior	1	0.05	0.82
Model size * Behavior	1	0.06	0.82

Table 4-14. ANCOVA test on body weight and shape with other variables as covariates

Source	DF	F	P-value
Similarity	1	19.90	0.00*
Hours exercised	1	16.28	0.00*
Model size	1	0.12	0.74
Behavior	1	0.60	0.44
Model size * Behavior	1	0.02	0.88

* $p \leq 0.05$

Table 4-15. Means for attitude towards the ad

Model size	Behavior	Mean	Std. Deviation	N
Thin	Absent	4.86	1.08	35
	Present	4.51	1.36	35
	Total	4.68	1.23	70
Normal	Absent	4.68	0.83	34
	Present	5.06	1.21	35
	Total	4.87	1.05	69
Total	Absent	4.77	0.96	69
	Present	4.78	1.31	70
	Total	4.77	1.15	139

Table 4-16. ANOVA test on attitude towards the ad

Source	DF	F	P-value
Model size	1	0.93	0.34
Behavior	1	0.01	0.94
Model size * Behavior	1	3.60	0.06

Table 4-17. ANCOVA test on attitude towards the ad with other variables as covariates

Source	DF	F	P-value
Identification	1	6.49	0.01*
Model size	1	0.33	0.57
Behavior	1	0.00	0.97
Model size * Behavior	1	4.08	0.05*

* $p \leq 0.05$

Table 4-18: Means for attitude towards the brand

Model size	Behavior	Mean	Std. Deviation	N
Thin	Absent	4.93	0.86	35
	Present	4.94	0.81	35
	Total	4.93	0.83	70
Normal	Absent	5.09	0.78	34
	Present	4.96	1.07	35
	Total	5.03	0.93	69
Total	Absent	5.01	0.82	69
	Present	4.95	0.94	70
	Total	4.98	0.88	139

Table 4-19. ANOVA test on attitude towards the brand

Source	DF	F	P-value
Model size	1	0.39	0.53
Behavior	1	0.15	0.70
Model size * Behavior	1	0.19	0.66

Table 4-20. Means for purchase intentions

Model Size	Behavior	Mean	Std. Deviation	N
Thin	Absent	3.70	1.64	35
	Present	3.75	1.24	35
	Total	3.72	1.44	70
Normal	Absent	3.82	1.25	34
	Present	3.74	1.59	35
	Total	3.78	1.43	69
Total	Absent	3.76	1.45	69
	Present	3.74	1.42	70
	Total	3.75	1.43	139

Table 4-21. ANOVA test on purchase intentions

Source	DF	F	P-value
Model size	1	0.06	0.81
Behavior	1	0.00	0.96
Model size * Behavior	1	0.08	0.78

Table 4-22. ANCOVA test on purchase intentions with other variables as covariates

Source	DF	F	P-value
Hours of exercise	1	6.88	0.01*
Model size	1	0.04	0.85
Behavior	1	0.15	0.70
Model size * Behavior	1	0.10	0.76

* $p \leq 0.05$

Table 4-23. Manipulation check of model size

	Condition						F	P-value
	Thin model			Normal model				
	Mean	St. Dev.	N	Mean	St. Dev.	N		
Model body assessment	3.14	1.05	58	3.60	1.00	62	7.37	0.01
Participant body assessment	4.83	1.44	58	4.71	1.54	62	0.27	0.76
	t	P-value		t	P-value			
	7.58	0.00		5.23	0.00			

CHAPTER 5 DISCUSSION

The possible factors that could have created the results revealed by the main experiment are explained in this chapter. This study aimed to find a way in which the media, particularly advertising, could positively influence consumers' perceptions and lifestyles. Specifically, it examined the way athletic shoe advertising influenced health (lifestyle and self-perception) and brand (attitudes and purchase intentions) outcomes. It focused on the effects of model size and behavior on consumers' attitudes and actions. It was expected that a strategic use of model size and behavior would bring about better lifestyle choices and better brand outcomes. The results obtained did not reflect this.

The impact of model size on the dependent variables was stated in two hypotheses. It was believed that a normal looking model that assimilated the body size of the participant would bring about better health and brand outcomes. This study did not support the hypotheses posited.

The impact of behavior on the dependent variables was questioned from the beginning of this study since it had not been studied before. These questions were addressed by showing that that the presence and absence of behavior does not influence health or brand outcomes.

Health Outcomes

This section refers to hypothesis 1 (A normal model will be more likely than a thin model to positively influence health outcomes) and research question 1 (How does the presence or absence of behavior influence consumers' health outcomes?). Research question 3 (Does the model's body shape moderate the effects of the presence or absence of behavior?) was also addressed. Health outcomes in this study include attitudes towards exercise, intentions to exercise and self-perceptions of body image.

Data collected showed that neither model size nor behavior affected attitude towards exercise and intentions to exercise. It was expected that after the participant viewed a normal size model, attitude towards exercise and intentions to exercise would increase. This was thought because the similarity between the model and participant increases the chances of imitating the behavior seen in the ad (Hass, 1981; Stotland, Zander, & Natasoulas, 1961; Stotland & Canon, 1972). thus, having better attitudes towards it. However, data collected showed that a thin model and a normal looking model brought about the same positive attitudes towards exercise and intentions to exercise. Also, a model with the behavior absent or the behavior present also brought about similar positive attitudes towards exercise and intentions to exercise. Although no interaction effect between model size and behavior were found for intentions to exercise, a marginally close interaction effect was found for attitude towards exercise. A thin model with the behavior absent brought about better attitude towards exercise.

The fact that the results obtained were opposite to the results expected could be due to several reasons. First, the ad with the behavior absent shows a model that appears to be getting ready for a run and could insinuate the same results as the ad with the behavior present. Second, even though the models were statistically different in size, they were compared to two consecutive models in the Contour Drawing Scale, and therefore did not represent a large difference between them as desired (as it will be later explained).

Exploratory data analysis showed that model attractiveness and hours of exercise were variables that influenced the impact that the independent variables had on attitude towards exercise. Attractiveness and hours of exercise increased the positive impact that model size as well as the interaction effect between model size and behavior (research question 3), had on attitude towards exercise. Nonetheless, it decreased the impact of behavior on attitude towards

exercise. Even though attractiveness and hours of exercise influenced the impact the independent variables had, the effects were still not statistically significant. Therefore, a thin model and a normal looking model both influenced similarly (positive) the attitude participants had towards exercise. The model with the behavior present and the model with the behavior absent also influenced similarly (positive) the attitude participants had towards exercise. No moderating effect from model size was found on behavior for attitude towards exercise.

Exploratory data analysis also showed that hours of exercise significantly influenced the impact the independent variables had on intentions to exercise. Hours of exercise increased the positive effect that model size (hypothesis 1), behavior (research question 1), and the interaction effect between model size and behavior (research question 3) had on intentions to exercise. Even though hours of exercise influenced the impact the independent variables had, the effects were still not statistically significant. Therefore, a thin model and a normal looking model both influenced similarly (positive) the participants' intentions to exercise. The model with the behavior present and the model with the behavior absent also influenced similarly (positive) the intentions participants had to exercise. No moderating effect from model size was found on behavior for attitude towards exercise.

These results could be due to sample bias. Data collected demonstrated that of the students sampled, only 6.90% of participants did not exercise; 79.90% of participants exercised moderately (1-6 hours a week); and 13.20% exercised heavily (7 or more hours a week). People that already exercise cannot be further motivated to have better attitudes towards exercise or intentions to exercise. Consequently, the sample used in the study strongly influenced the outcomes.

However, this does not discard the fact that model size could influence attitudes and intentions to exercise in another environment. The sample used (college students) does not relate in overall lifestyle to the majority of the population for several reasons. College students have more active lifestyles, in contrast to the rest of the population who is working during the day, take on more daily responsibilities and have less time to exercise. College students are not only walking around campus frequently, but also incorporate exercise into their weekly routines. This in turn leads to smaller body sizes than the average person. For example, this study demonstrated that the average size for a woman was between sizes 2 (21.20%), 4 (19.20%), and 6 (21.90%) in comparison to the average American woman who is a size 16 (Lee, 2005).

Since the media have been considered to be a source that promotes body image discrepancies by constantly portraying unrealistic body sizes (Oppliger, 2007), it was also expected that a normal size model would be more likely to positively influence self-perceptions (body image). However, it was found that the presence of a normal looking model or a thin model yielded the same results (in terms of body image perceptions).

The effects of behavior were explored in this study and it was found that a model with the behavior present or absent yielded similar neutral results. The interaction between model size and behavior were also being explored and no significant effects were found on body image perceptions.

Additional exploratory analysis of data showed that similarity between the model and the participants, as established by Osei, influenced negatively, therefore decreasing the impact of model size, behavior and the interaction between both independent variables on body esteem. Even though similarity influenced the impact the independent variables had, the effects were still not statistically significant. A thin model and a normal looking model both similarly influenced

the participants' body-esteem. The model with the behavior present and the model with the behavior absent also similarly influenced the participants' body esteem. No moderating effect from model size was found on behavior for body esteem.

Exploratory analysis of covariance also showed that similarity and hours of exercise significantly influenced the impact the independent variables had on body image (body weight and shape schema). Similarity and hours of exercise increased the neutral effect that model size and behavior had on body weight and shape. However, it decreased the interaction effect between model size and behavior on the variable. Even though similarity and hours of exercise influenced the impact the independent variables had, the effects were still not statistically significant. Therefore, a thin model and a normal looking model both similarly influenced the participants' body weight and shape self-perceptions. The model with the behavior present and the model with the behavior absent also influenced similarly the participants' body weight and shape self-perceptions. No moderating effect from model size was found on behavior for body weight and shape self-perceptions.

These results could also have been due to the fact that model size was not very different in the thin versus normal model as it would have been if the sample was not of college students. Participants were asked to compare the models they saw in the ad to the models from the Contour Drawing Rating Scale. Thin models were compared to the third of the nine models presented to them in the Contour Drawing Scale. Normal models were compared to the fourth model of the nine models presented. Originally, a larger difference between the thin models and the normal models was desired. However, these were the model sizes that were similarly attractive and significantly different in terms of body size assessments in the pretest. Even though the models from the Contour Drawing Scale chosen by participants to resemble the

models of the ads were not spread farther apart in terms of size, analysis of variance of the body assessment between the model sizes demonstrated that the model sizes were significantly different, $F(1, 137) = 7.37, p = 0.01$. Therefore, statistics show that model size manipulations were successful. Nonetheless, the normal model was also significantly different in terms of size from the participant, $t = 5.23, p = 0.00$ and the resemblance needed was not present.

These outcomes on body image perceptions were also partly related to the influence the sample used had on the results. People who exercise tend to have better self-perceptions of body image than people who do not. These people tend to be in good physical shape and have better body image self-perceptions. This tendency to exercise could also explain behavior's lack of influence on self-perceptions of body image as well as other health outcomes. Like model size, 93.10% of participants exercised at least 1 hour a week. This sample contained people who were already satisfied with their body image, as it could be noted that there was no mean difference in the attitudes when the ads presented models with the behavior present or absent.

The Social Learning Theory has stated that the depictions of behaviors portrayed in the media serve as models of behavior that viewers can imitate (Bandura, 1994). This is done when people view rewards they want to obtain from the model and believe that by imitating the behavior, they will acquire them. If ads, such as the stimuli used in this study, do not have any rewards or punishments, the chances of imitation of behavior decreases. Health outcomes could have also been affected by the lack of impact from behavior on desire to look like the model. Since the presence or absence of behavior did not bring about desire, attitudes towards exercise and intentions to exercise were not influenced because people had no motivation to be like the model or do what the model did.

Brand Outcomes

This section refers to hypothesis 2 (A normal model will positively influence brand-related outcomes rather than a thin model) and research question 2 (How does the presence or absence of behavior influence consumers' brand-related outcomes?). Research question 3 (Does the model's body shape moderate the effects of the presence or absence of behavior?) was also addressed. Brand-related outcomes include attitude towards the ad, attitude towards the brand and purchase intentions.

Model size affected brand outcomes inadvertently as well. It was expected that a normal looking model would create better attitudes towards the ad, brand and better purchase intentions. The presence and absence of behavior also did not influence attitude towards the ad, attitude towards the brand or purchase intentions. Model size also did not moderate the effects of the presence or absence of behavior.

For attitude towards the ad, model size and behavior had no impact on the results but there was a marginally close to significant interaction effect. In other words a thin or normal model resulted in the same positive attitude towards the ad. Also, the presence or absence of behavior resulted in similar positive attitude towards the ad. Model size did not moderate the impact of behavior on attitude towards the ad. Rather results indicated that the interaction was seen in the presence of behavior moderated the effects of the normal looking model.

Previous research demonstrated that one of the factors that influences attitude towards the ad was attractiveness (Caballero & Solomon, 1984, Hass, 1981). Although it was found that normal models ($M = 5.07$, $SD = 1.03$) were more attractive than thin models ($M = 4.80$, $SD = 1.27$), the mean difference between both was of 0.27 and not significantly different ($F(1, 135) = 1.92$, $p > 0.05$). Therefore, since both model sizes were seen as similarly attractive, positive attitude towards the ad were possible (Halliwel & Dittmar, 2004).

Attractive sources change attitudes by means of identification (Hass, 1981). Nevertheless, additional data analysis conducted demonstrated that identification with the model decreased the impact that model size and behavior had on attitude towards the ad. No significant effects were found. Identification influenced the interaction effect between model size and behavior. Statistically significant results were obtained, therefore a moderating impact of model size on behavior was found for attitude towards the ad. Nonetheless, no mean differences between conditions were found.

Model size, behavior or an interaction of both variables did not affect attitude towards the brand. Both thin and normal models had positive brand attitudes as well as models with the behavior present or absent. Model size did not moderate the effect of behavior on the dependent variables. Additional data analysis showed that no other variable influenced the effects of model size, behavior or the interaction of both on attitude toward the brand either. However, it can be inferred that participants' attitude towards the brand was given based on previous attitudes. The main study's data showed positive attitudes ($M = 4.98$, $SD = 0.88$) that was similar to the pretest.

Purchase intentions were also not affected by the model size presented to participants, the behavior portrayed or the interaction of model size and behavior. Both thin and normal models had low purchase intentions as well as models with the behavior present or absent. Additional data analysis showed that hours of exercise decreased the influence of model size on purchase intentions but increased the influence of behavior and interaction effect of model size and behavior on purchase intentions. However, because no statistically significant main or interaction effects were found, it can be stated that a thin model and a normal looking model both influenced similarly (neutral) participants' purchase intentions; the model with the behavior present and the model with the behavior absent also influenced similarly (neutral) participants'

purchase intentions; and no moderating effect from model size was found on behavior for purchase intentions.

The fact that there was a lack of intentions to purchase the product, athletic shoes, could have been due to numerous reasons, primordially around the fact that athletic shoes are not bought by just looking at an ad. Before buying an athletic shoe, one must consider the systematic and long process (Jones, 2007) where a person searches for a shoe that satisfies his/her specific needs. When buying athletic shoes, people search for one that fits the purpose they are going to use it for, such as running, walking, track and field, different sports, cheering, etc. Also, now there are a lot of different technologies, such as gel kinsei, gel kinetic and structured cushioning that are made to fit individual conditions people have and purpose of use. People also take into consideration the style of the shoe, price and even select shoes based on brand loyalty. Another issue that could have affected these results is that there could have been no salience of the issue in the minds of participants. If they were not in the market to purchase athletic shoes, purchase intentions could have been reflected low, as it was seen, indifferent to what model size was presented.

Additional Explanations

There are additional factors that could have influenced the results obtained in this study. In order to maintain the validity and perception that the stimuli presented were real ads and not made up for the study, ads from magazines were selected. It was hard to find ads from one brand that had models running (behavior present) and modeling (behavior absent). Therefore, the Asics ads were chosen because they contained both situations. But, as previously mentioned, the ad with the behavior absent shows a model that appears to be getting ready for a run and therefore could insinuate the same results as the ad with the behavior present.

From the information presented it can be concluded that this study can be improved and different results can be expected by altering several problems and limitations that could have influenced the results. Although none of the hypotheses were supported and no influence of behavior was found on the dependent variables, the factors that were found to intervene in this study can be controlled in future studies.

CHAPTER 6 LIMITATIONS

After conducting this experiment, several limitations were found that could have altered the results and could pave the way for a more effective way of testing the concept in the future if properly addressed. The first and most important limitation of the study was the presence of sample bias. The sample used did not represent the actual population. College students from the College of Journalism and Communications of the University of Florida were used. This group of people stated that they were physically active and therefore resulted in a lack of support of the hypotheses or research questions presented. A future study should make sure to filter out people who are involved in physical activity in order to properly measure if the model's size and behavior being represented encourages better health and brand outcomes. Also the sample used came from a college that specializes in teachings of communication methods such as advertising. Therefore, previous knowledge on how advertising works could have influenced the results.

The use and construction of stimuli should also be more carefully crafted. In order to maintain external validity and a more realistic view of the stimuli, actual ads from magazines were used. This created several limitations including that the model representing the absence of behavior which was different from the model representing the presence of behavior because ads with the same model were not found. Future studies should make sure to use the same model for both conditions so that it does not become a confounding variable that could influence the results. Second, another limitation created by the ad selection was that the model who was not presenting the behavior was leaning forward in a stretching position that insinuated the fact that she was going to run or just finished going for a run, which could also influence the results. Future studies should make sure that the model with the behavior present only models the product and does not imply the behavior. Finally, the selection of different sizes and ads could

have yielded different results. From the data obtained in the pretest, thin model 2 and normal model 2 for Ads 3 and 4 demonstrated to be another feasible selection. They were found to be equally attractive (thin model 2: $M = 4.26$, $SD = 1.61$; normal model 2: $M = 4.69$, $SD = 1.50$) with p-values larger than 0.05. They also differed in terms of body size assessments (thin model 2: $M = 1.89$, $SD = 0.80$; normal model 2: $M = 4.65$, $SD = 1.39$) with p-values below 0.05. These sizes could have also created a larger differentiation between sizes and could have brought about more informative results. Also, to resolve the issue of the model position, Ad 3 (model playing pool with the behavior absent) and Ad 4 (model running with the brown background) should have been used.

When crafting the stimuli so that different model sizes can be presented, more professional art work should be done. Because of the limited resources the experimenter had as a master's student, the ads were manipulated by another student at the Ft. Lauderdale School of Design. Results showed that overall 54% of participants thought the ads were digitally altered in size. There is a possibility that if a professional graphic artist had been used, it could have reduced this limitation and the effectiveness of this study could have increased. Digital alteration should have also been measured in a scale, instead of a yes or no response.

The brand selected for the study, Asics, was a limitation to the study as well. People had pre-established attitudes towards the brand. Even though pretest results demonstrated relatively neutral attitudes towards Asics ($M = 4.74$, $SD = 1.35$), other brands could have been more successful such as Mizuno ($M = 4.06$, $SD = 1.13$) or Fila ($M = 3.98$, $SD = 1.27$). Also, the purpose of the product should be taken into consideration. Since this study focused on athletic shoes, it should have been made more clear whether it was running, walking, sports, etc. that the ad referred to.

The reasons why people purchase running shoes should also be incorporated into a future study as it was seen that this could affect purchase intentions. The study should also include what specific type of physical activity the participant is involved in and for how long.

In terms of data analysis, the control stimulus where no model was shown was excluded from the study. This should be included in future studies in order to compare the results of having a model to not having a model.

Finally, there was a mistake made when questions were entered into the MediaLab program during the pretest and attitude towards the ad was not collected. This limitation could have caused a variation in the selection of the stimuli.

APPENDIX A
INFORMED CONSENT FOR PRETEST QUESTIONNAIRE

Study Title: Evaluation Of Brand Advertising

Please read through this entire document before you consent to your participation in the study. Thank you.

Purpose of this research study: The purpose of this study is to get to know people's opinions on different ads.

What you will be asked to do in this study: Participants will be asked to view ads and fill in a questionnaire that will remain confidential.

Time required: Approximately 20 minutes

Risks and benefits: There are no anticipated risks or immediate benefits associated with participating in this study.

Compensation: No monetary compensation will be given on behalf of the experimenter for participating in this study. There is a possibility of receiving extra credit if the instructor of the course from where the student was recruited decides to do so. The extra credit provided will be no greater than 1% of the final grade.

Confidentiality: Every person's answer from this study will remain confidential. No names will be used in any part of the study. *Your identity will be kept confidential to the extent provided by law.*

Voluntary participation: Participation in this study is completely voluntary.

Right to withdraw: Any participant may withdraw at any moment. No penalty will be enforced.

Results: The individual results of this study will only be viewed by the experimenter, the supervisor, and the coders. Group results will be available for the public to view.

Whom to contact if you have any questions about this study: If any participant has any questions, please contact the experimenter or supervisor.

Mari Luz Zapata Ramos
Graduate Student Researcher at UF
mzapata@ufl.edu

Prof. Hyojin Kim, Ph.D.
Supervisor
352-392-0675/ hkim@jou.ufl.edu

Whom to contact about your rights as a research participant in this study: UFIRB Office
IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433

Agreement: I have read the document stating the procedures to be used and followed in this study. I have received a copy of informed consent and AGREE to participate in the study.

Participants _____ Date _____

Principal Experimenter _____ Date _____

APPENDIX B
PRETEST QUESTIONNAIRE

I am a master's student in the Department of Advertising in the College of Journalism and Communications at the University of Florida. I am conducting this survey as a part of my thesis requirements. Your participation is completely voluntary and you can withdraw from the study at any moment. There are no right or wrong answers. Your honest responses will be appreciated. Thank you for your time.

Instructions: Read the following questions and statements carefully. Answer truthfully and honestly how you feel about each. Select only one response.

For the following scales, mark with an X over the line that most corresponds in your opinion. The closer to the word, the stronger the feeling/intention.

Attitude towards the brand (Attitude towards the brand in the ad (Gardner, 1985))
--

How do you feel about the running shoes of:

1) Asics

Bad:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good
Dislike quite a lot:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Like quite a lot
Unpleasant:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Pleasant
Poor quality:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good quality

2) New Balance

Bad:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good
Dislike quite a lot:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Like quite a lot
Unpleasant:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Pleasant
Poor quality:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good quality

3) Nike

Bad:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good
Dislike quite a lot:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Like quite a lot
Unpleasant:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Pleasant
Poor quality:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good quality

4) Reebok

Bad:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good
Dislike quite a lot:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Like quite a lot
Unpleasant:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Pleasant
Poor quality:	_____ : _____ : _____ : _____ : _____ : _____ : _____ :	Good quality

5) Saucony

Bad:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good
Dislike quite a lot:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Like quite a lot
Unpleasant:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Pleasant
Poor quality:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good quality

6) Mizuno

Bad:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good
Dislike quite a lot:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Like quite a lot
Unpleasant:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Pleasant
Poor quality:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good quality

7) Fila

Bad:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good
Dislike quite a lot:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Like quite a lot
Unpleasant:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Pleasant
Poor quality:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good quality

8) In addition to the brands mentioned above, can you think of any other brand of running shoes? If so, please write it in the space provided and select how you feel about it.

- ___ No, I can't think of any other brand (Skip to the next question).
- ___ Yes. Please specify _____. How do you feel about the brand?

Bad:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good
Dislike quite a lot:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Like quite a lot
Unpleasant:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Pleasant
Poor quality:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Good quality

Attitude towards the ad (Martin, Wentzel, & Tomczak, 2008)

Now I will show you a few ads. Please tell me what you think about each ad.

Ad #1 - Ad #5 (with a model)

9) Overall, what is your impression of this ad?

Good:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Bad
Interesting :	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Uninteresting
Like:	_____:	_____:	_____:	_____:	_____:	_____:	_____:	Dislike

Model attractiveness (Bruner II & Hensel, 1998)

Fill in the following scales on how strongly you agree or disagree with the statements presented. If the ad did not have a model, please skip to question # 33.

10) The model is attractive.

Strongly disagree: _____:_____:_____:_____:_____:_____:_____ : Strongly agree
1 2 3 4 5 6 7

11) In my opinion, the model is good looking.

Strongly disagree: _____:_____:_____:_____:_____:_____:_____ : Strongly agree
1 2 3 4 5 6 7

12) The model is pretty.

Strongly disagree: _____:_____:_____:_____:_____:_____:_____ : Strongly agree
1 2 3 4 5 6 7

Similarity (Osei, 2001)

Please state how similar or dissimilar you are to the person pictured in the ad on the following traits.

13) How similar are you to the character pictured in the ad on overall lifestyle?

Not at all similar : _____:_____:_____:_____:_____:_____:_____ : Very similar

14) How similar are you to the character pictured in the ad on cultural background (ethnicity, nationality, etc.)?

Not at all similar: _____:_____:_____:_____:_____:_____:_____ : Very similar

15) How similar are you to the character pictured in the ad on dress? For example, when you perform a similar activity, do you wear clothes similar to the model's?

Not at all similar: _____:_____:_____:_____:_____:_____:_____ : Very similar

16) How similar are you to the character pictured in the ad on appearance?

Not at all similar: _____:_____:_____:_____:_____:_____:_____ : Very similar

17) How similar are you to the character pictured in the ad on basic values?

Not at all similar: ____:____:____:____:____:____:____: Very similar

18) How similar are you to the character pictured in the ad on weight?

Not at all similar: ____:____:____:____:____:____:____: Very similar

Perceptions of the Model

Desirability (Weintraub et al., 2007)

The following questions ask about your thoughts on the model in the ad. Please select the space that most resembles how you feel for each statement.

19) The person in the ad looks like he or she is having fun.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

20) The person in the ad looks popular.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

21) The person in the ad looks powerful.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

22) The person in the ad looks like he or she is accepted by others.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

Identification (Weintraub et al., 2006, Weintraub et al., 2007)

23) I want to be like the person in the ad.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

24) It would be fun to look like the person in the ad.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

25) The person in ad does things I want to do.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

26) I wish I were as good looking as the person in the ad.

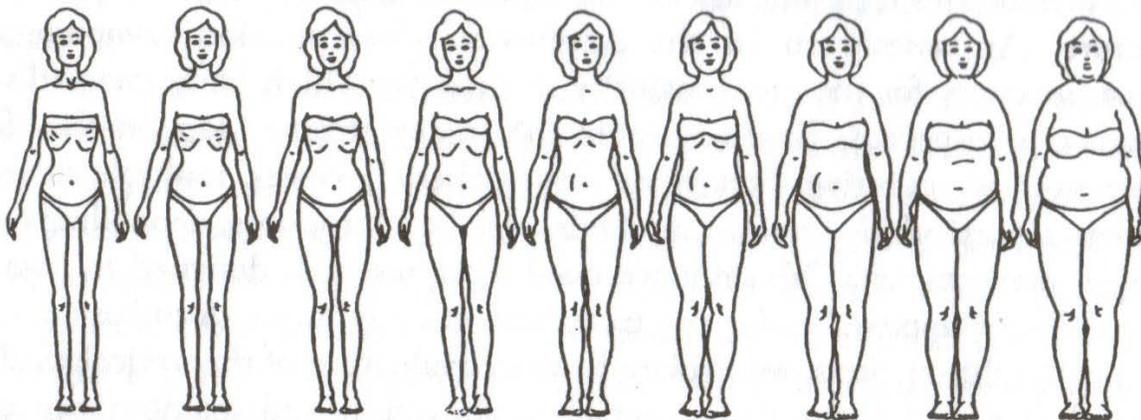
Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

27) I want to have as much fun as the person in the ad.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

Model's Body Shape Comparison - Contour Drawing Rating Scale (Thompson et al., 1999; Thompson & Gray, 1995)

28) Select the model below whose body size most resembles the model's in the ad.



Manipulation checks

29) In your opinion, how much does the model weigh? ____ pounds

30) In your opinion, how tall is the model? Please state using feet and inches. For example, 10 feet and 6 inches. ____ feet and ____ inches

31) In your opinion, was the model in the ad digitally altered in size? Take into consideration only the size of the model and no other aspect of the ad.

___ Yes
___ No

Ad #6 (without a model)

32) Overall, what was your impression of the ad shown?

Good: _____:_____:_____:_____:_____:_____:
Interesting: _____:_____:_____:_____:_____:_____:
Like: _____:_____:_____:_____:_____:_____:
Bad
Uninteresting
Dislike

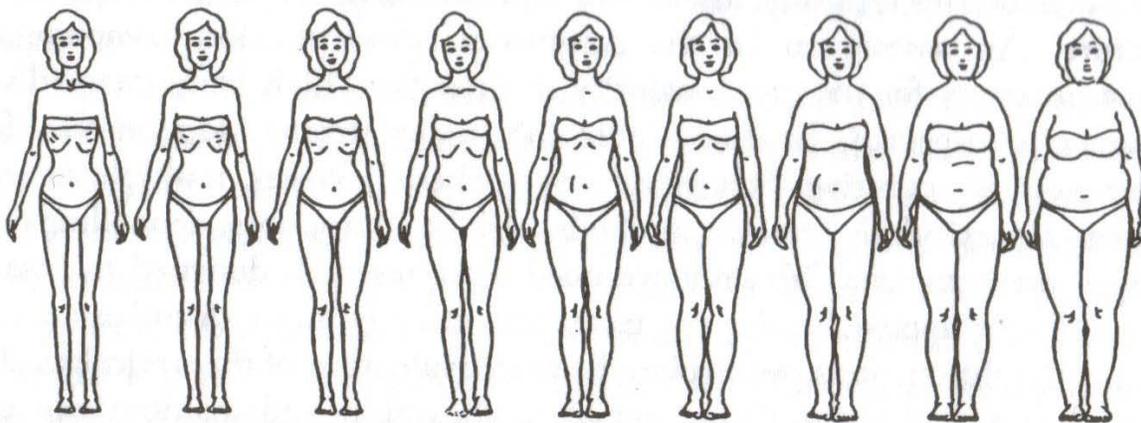
Participant Information

The following questions ask about yourself. Please provide honest answers. Your answers will be kept confidential.

- 33) What is your height? Please state in the following format: ___ feet and ___ inches
- 34) What is your weight? _____ pounds
- 35) What is your typical clothing size?
- a) 0
 - b) 2
 - c) 4
 - d) 6
 - e) 8
 - f) 10
 - g) 12
 - h) 14 or larger

Participants body shape (size) comparison – Contour Drawing Rating Scale (Thompson et al., 1999; Thompson & Gray, 1995)

36) Select the model whose body size most likely resembles your own.



Demographics

37) What is your age: _____

38) Department: (If you are a double major, please select the primary major)

- a) Advertising
- b) Public Relations
- c) Telecommunications
- d) Journalism
- e) Other. Please specify _____

39) Gender: _____ Male
 _____ Female

Thank you for your time and cooperation!

APPENDIX C
INFORMED CONSENT FOR MAIN EXPERIMENT

Study Title: Evaluation of Brand Advertising

Please read through this entire document before you consent to your participation in the study. Thank you.

Purpose of this research study: The purpose of this study is to get to know people's opinions on different ads.

What you will be asked to do in this study: Participants will be asked to view ads and fill in a questionnaire that will remain confidential.

Time required: Approximately 30 minutes

Risks and benefits: There are no anticipated risks or immediate benefits associated with participating in this study.

Compensation: No monetary compensation will be given on behalf of the experimenter for participating in this study. There is a possibility of receiving extra credit if the instructor of the course from where the student was recruited decides to do so. The extra credit provided will be no greater than 1% of the final grade.

Confidentiality: Every person's answer from this study will remain confidential. No names will be used in any part of the study. *Your identity will be kept confidential to the extent provided by law.*

Voluntary participation: Participation in this study is completely voluntary.

Right to withdraw: Any participant may withdraw at any moment. No penalty will be enforced.

Results: The individual results of this study will only be viewed by the experimenter, the supervisor, and the coders. Group results will be available for the public to view.

Whom to contact if you have any questions about this study: If any participant has any questions, please contact the experimenter or supervisor.

Mari Luz Zapata Ramos
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Prof. Hyojin Kim, Ph.D.
Supervisor
352-392-0675/ hkim@jou.ufl.edu

Whom to contact about your rights as a research participant in this study: UFIRB Office
IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433

Agreement: I have read the document stating the procedures to be used and followed in this study. I have received a copy of informed consent and AGREE to participate in the study.

Participants _____ Date _____

Principal Experimenter _____ Date _____

APPENDIX D
MAIN EXPERIMENT QUESTIONNAIRE

I am a master's student in the Department of Advertising in the College of Journalism and Communications at the University of Florida. I am conducting this questionnaire as a part of my thesis requirements. Participation is completely voluntary and you can withdraw at any moment. There are no right or wrong answers. Your honest responses will be appreciated.

Thank you for your time.

Instructions: Please look at each of the following ads carefully. Then, read the following questions and statements carefully. Answer truthfully and honestly how you feel about each. Select only one response.

Ads #1-4 and Manipulation ad shown.

Recall the ads you just viewed. Answer the following questions based on the ADVERTISEMENT THAT CONTAINED A MODEL ONLY.

For the following scales, select the box that most corresponds in your opinion. The closer to the word, the stronger the feeling/ intention.

Attitude towards the ad (Martin, Wentzel, & Tomczak, 2008)

1. What are your thoughts or feelings about the **ad** presented?

Good:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 7 6 5 4 3 2 1	Bad
Uninteresting:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 1 2 3 4 5 6 7	Interesting
Like:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 7 6 5 4 3 2 1	Dislike

Attitude towards the brand in the ad (Gardner, 1985)

2. What are your thoughts or feelings about the **brand** presented?

Bad:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 1 2 3 4 5 6 7	Good
Like quite a lot:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 7 6 5 4 3 2 1	Dislike quite a lot
Unpleasant:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 1 2 3 4 5 6 7	Pleasant
Poor quality:	_____ : _____ : _____ : _____ : _____ : _____ : _____ : 1 2 3 4 5 6 7	Good quality

Intentions to Exercise – Behavioral Intention (Bruner II, James, & Hensel, 2005)

6. The following scales measure a range of likelihood of engaging in exercise or any form of physical activity **during the next 7 days**. Mark the space that best describes you. The closer to the word, the stronger the feeling/ intention.

Unlikely	___: ___: ___: ___: ___: ___: ___	Likely
Non-existent	___: ___: ___: ___: ___: ___: ___	Existent
Probable	___: ___: ___: ___: ___: ___: ___	Improbable
Impossible	___: ___: ___: ___: ___: ___: ___	Possible
Certain	___: ___: ___: ___: ___: ___: ___	Uncertain
Definitely would not do	___: ___: ___: ___: ___: ___: ___	Definitely would do
Very frequent	___: ___: ___: ___: ___: ___: ___	Not at all
No chance	___: ___: ___: ___: ___: ___: ___	Certain chance
Probably not	___: ___: ___: ___: ___: ___: ___	Probably

Model attractiveness (Bruner II & Hensel, 1998)

Fill in the following scales on how strongly you agree or disagree with the statements presented. If the ad had no spokesperson, skip to question #28.

7. The model is attractive.

Strongly disagree: ___: ___: ___: ___: ___: ___: ___: Strongly agree
 1 2 3 4 5 6 7

8. In my opinion, the model is good looking.

Strongly disagree: ___: ___: ___: ___: ___: ___: ___: Strongly agree
 1 2 3 4 5 6 7

9. The model is pretty.

Strongly disagree: ___: ___: ___: ___: ___: ___: ___: Strongly agree
 1 2 3 4 5 6 7

Attitude toward the Spokesperson (Similarity) (Osei, 2001)

Please state how similar or dissimilar you are to the person pictured in the ad on the following traits.

10. How similar are you to the character pictured in the ad on overall lifestyle?

Not at all similar: _____:_____:_____:_____:_____:_____:_____: Very similar
1 2 3 4 5 6 7

11. How similar are you to the character pictured in the ad on dress? For example, when you perform a similar activity, do you wear clothes similar to the model's?

Not at all similar: _____:_____:_____:_____:_____:_____:_____: Very similar
1 2 3 4 5 6 7

12. How similar are you to the character pictured in the ad on appearance?

Not at all similar: _____:_____:_____:_____:_____:_____:_____: Very similar
1 2 3 4 5 6 7

13. How similar are you to the character pictured in the ad on basic values?

Not at all similar: _____:_____:_____:_____:_____:_____:_____: Very similar
1 2 3 4 5 6 7

14. How similar are you to the character pictured in the ad on weight?

Not at all similar: _____:_____:_____:_____:_____:_____:_____: Very similar
1 2 3 4 5 6 7

Perceptions of the model

Desirability (Weintraub et al., 2007)

Select the space that most resembles how you feel for each statement.

15. The person in the ad looks like he or she is having fun.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

16. The person in the ad looks popular.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

17. The person in the ad looks powerful.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

18. The person in the ad looks like he or she is accepted by others.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

Identification (Weintraub et al., 2006, Weintraub et al., 2007)

19. I want to be like the person in the ad.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

20. It would be fun to look like the person in the ad.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

21. The person in ad does things I want to do.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

22. I wish I were as good looking as the person in the ad.

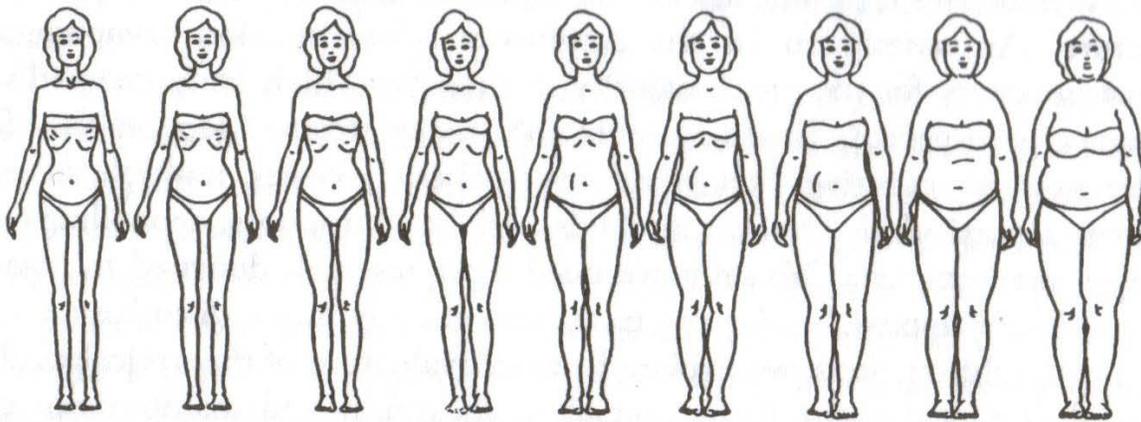
Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

23. I want to have as much fun as the person in the ad.

Strongly disagree: ____:____:____:____:____:____:____: Strongly agree

Model's Body Shape – Comparison Scale (Thompson et al., 1999; Thompson & Gray, 1995)

24. Select (circle) the model below whose body size most resembles the model's in the ad body.



Manipulation checks

25. In your opinion, how much does the model weigh? _____ pounds

26. In your opinion, how tall is the model? _____ feet and _____ inches

Body Esteem Scale for Adolescents and Adults (Mendelson, White, & Mendelson, 1998; Thompson et al., 1999)

Indicate how often you agree with the following statements: Ranging from *never* (1) to *always* (5), circle (or click) the appropriate number beside each statement.

	Never	Seldom	Sometimes	Often	Always
27. I like what I look like in pictures.	1	2	3	4	5
28. Other people consider me good looking.	1	2	3	4	5
29. I'm proud of my body.	1	2	3	4	5
30. I am preoccupied with trying to change my body weight.	1	2	3	4	5
31. I think my appearance would help me get a job.	1	2	3	4	5
32. I like what I see when I look in the mirror.	1	2	3	4	5
33. There are lots of things I'd change about my looks if I could.	1	2	3	4	5
34. I am satisfied with my weight.	1	2	3	4	5
35. I wish I looked better.	1	2	3	4	5
36. I really like what I weigh.	1	2	3	4	5
37. I wish I looked like someone else.	1	2	3	4	5
38. People my own age like my looks.	1	2	3	4	5
39. My looks upset me.	1	2	3	4	5
40. I'm as nice looking as most people.	1	2	3	4	5
41. I'm pretty happy about the way I look.	1	2	3	4	5
42. I feel I weigh the right amount for my height.	1	2	3	4	5
43. I feel ashamed of how I look.	1	2	3	4	5
44. Weighing myself depresses me.	1	2	3	4	5
45. My weight makes me unhappy.	1	2	3	4	5
46. My looks help me get dates.	1	2	3	4	5
47. I worry about the way I look.	1	2	3	4	5
48. I think I have a good body.	1	2	3	4	5
49. I'm looking as nice as I'd like to.	1	2	3	4	5

Body Weight and Shape Self- Schema Scale (Stein & Hedger, 1997; Thompson et al., 1999)

For each of the following, please indicate "how much it describes you now?"

	Not at all	A little	Somewhat	Quite a bit	Very much
50. Slim	1	2	3	4	5
51. Physically fit	1	2	3	4	5
52. Athletic	1	2	3	4	5
53. Too fat	1	2	3	4	5
54. Out-of-shape	1	2	3	4	5
55. Ugly	1	2	3	4	5
56. Good looking	1	2	3	4	5

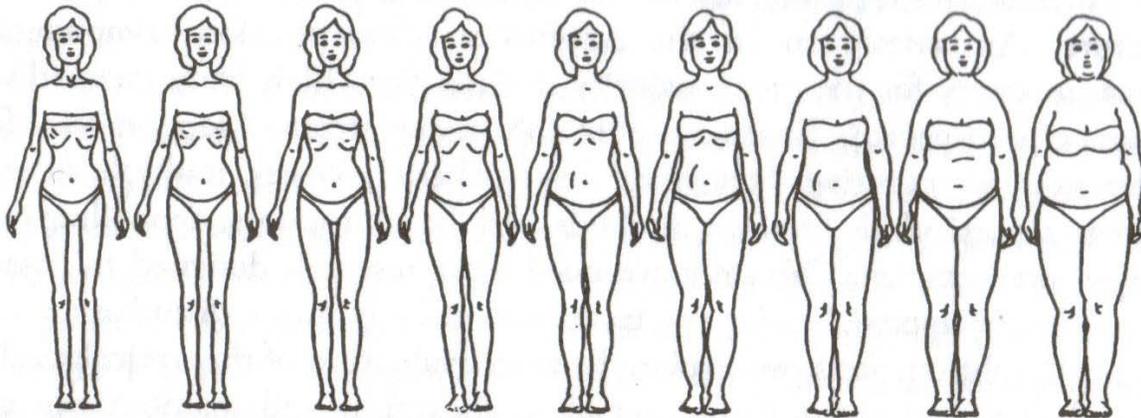
Participant Information

The following questions ask about yourself. Please provide honest answers. Your answers will be kept confidential.

57. What is your height? ___ feet and ___ inches
58. What is your weight? ___ pounds
59. Gender: ___ Male Please skip to question #62.
 ___ Female
60. What is your typical clothing size?
- a) 0
 - b) 2
 - c) 4
 - d) 6
 - e) 8
 - f) 10
 - g) 12
 - h) 14 or larger

Participants body shape (size) comparison – Contour Drawing Rating Scale (Thompson et al., 1999; Thompson & Gray, 1995)

61. Select the model whose body size most likely resembles your own.



Demographics

62. What is your age: _____

63. What is your race/ ethnicity?

- a) Caucasian
- b) African American
- c) Asian or Pacific Islander
- d) Hispanic
- e) Other. Please specify _____

64. Department: (If you are a double major, please select the primary major)

- a) Advertising
- b) Public Relations
- c) Telecommunications
- d) Journalism
- e) Other. Please specify _____

Manipulation check

65. In your opinion, were the models in the ads digitally altered in size?

- ___ No
- ___ Yes

66. What do you believe was the purpose of this study?

Thank you for your time and cooperation!

APPENDIX E
PRETEST STIMULI

Ad 1 Thin Model 2



Ad 1 Thin Model 1



Ad 1 Neutral Model



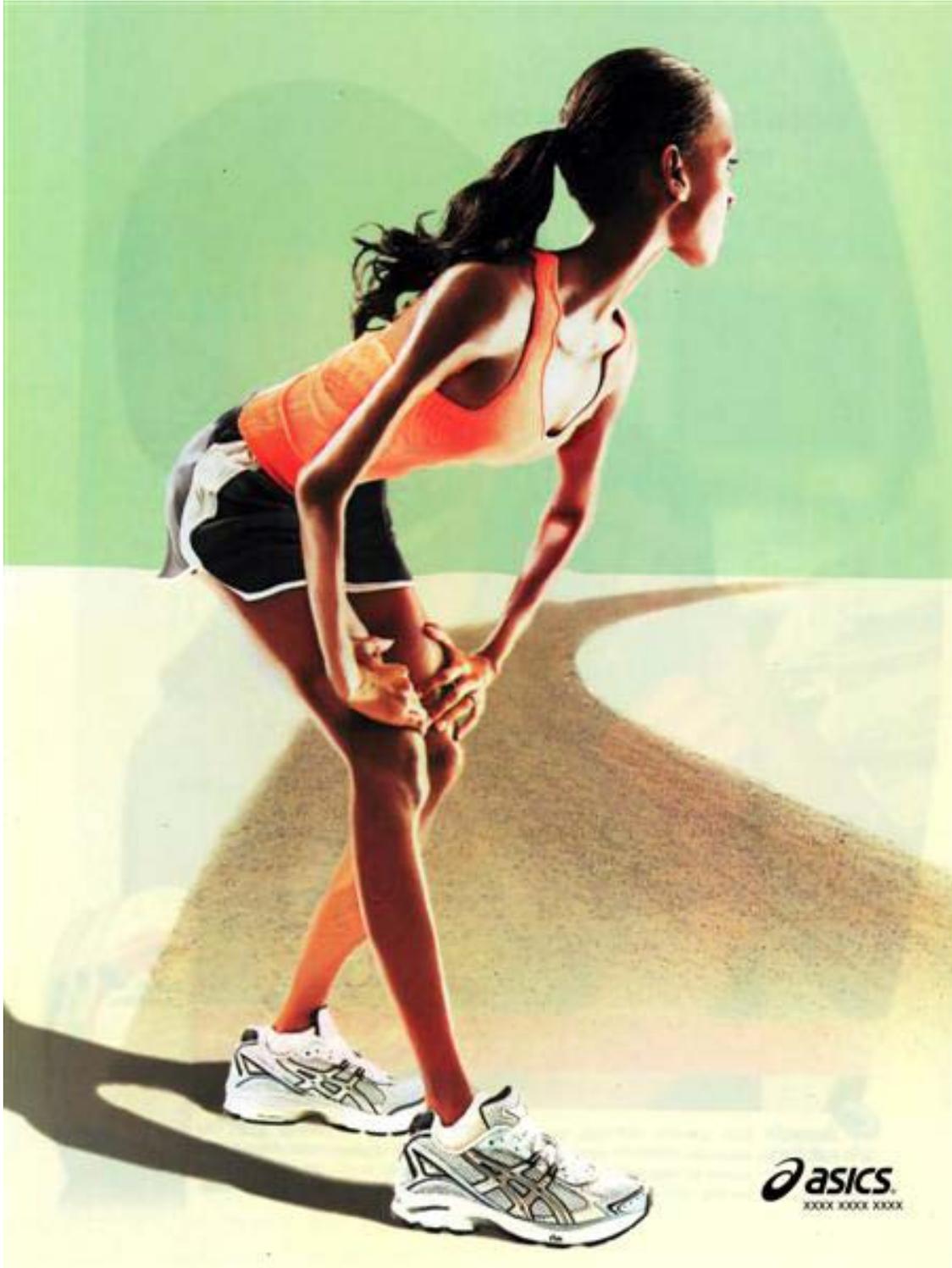
Ad 1 Normal Model 1



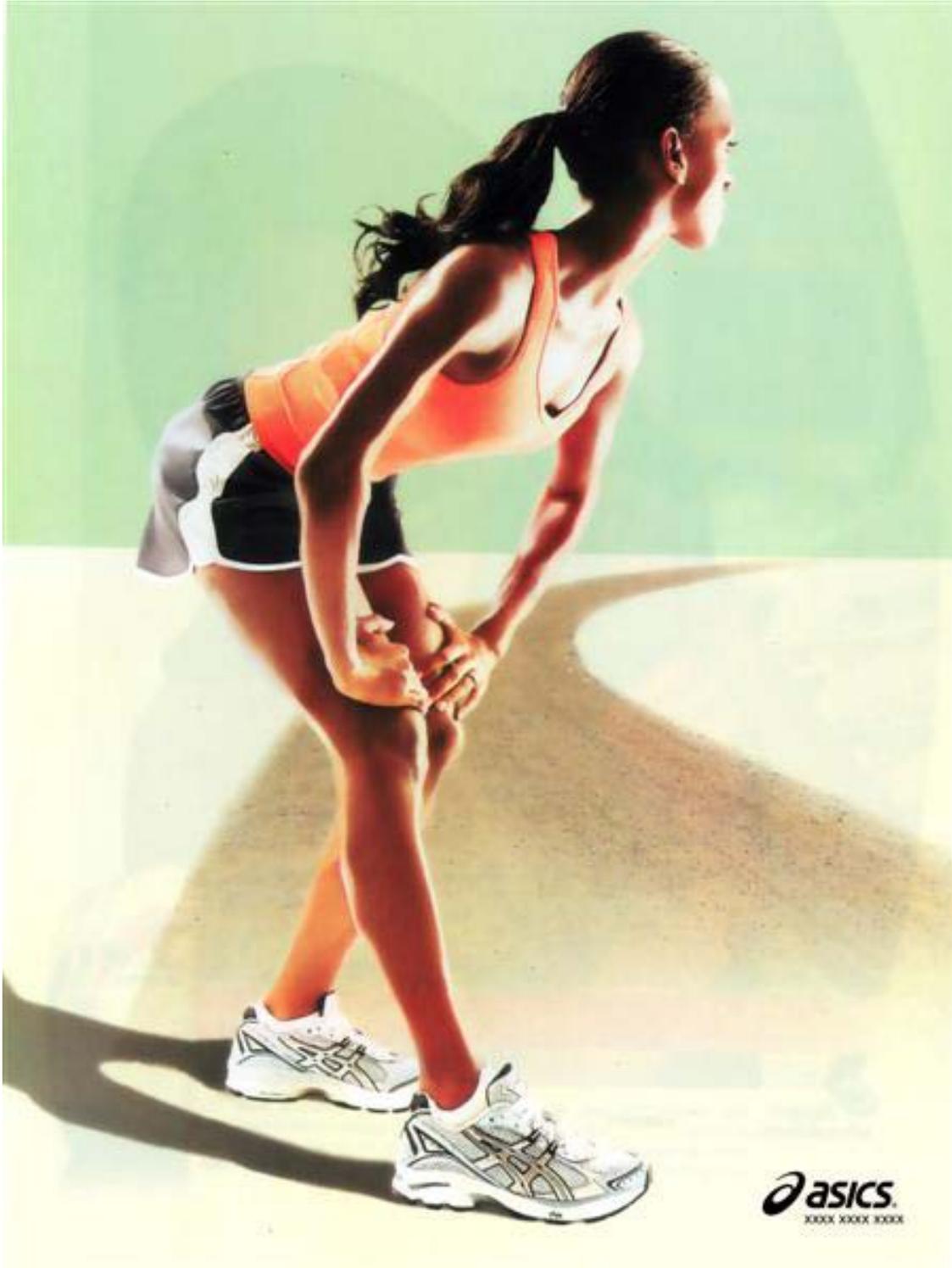
Ad 1 Normal Model 2



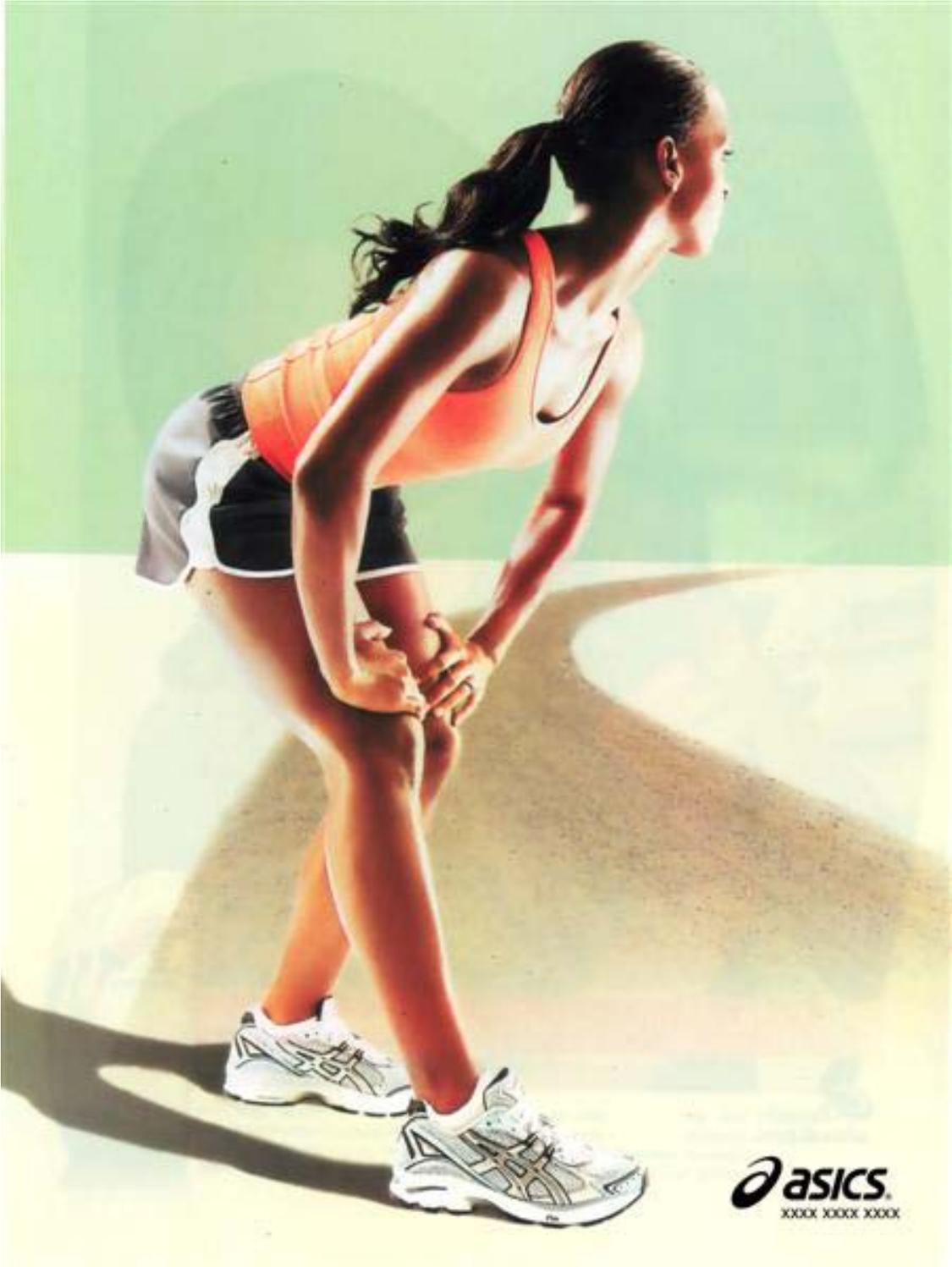
Ad 2 Thin Model 2



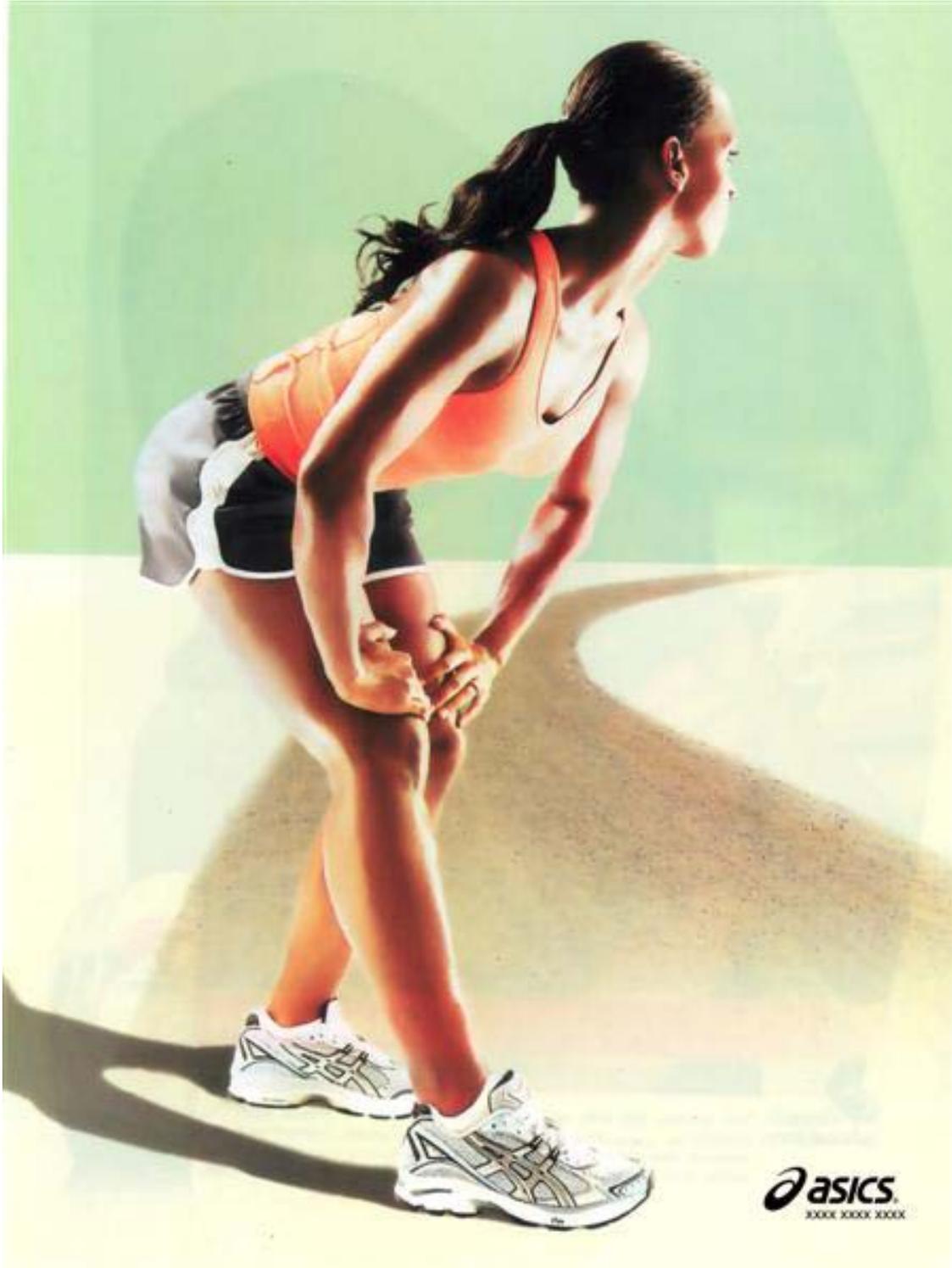
Ad 2 Thin Model 1



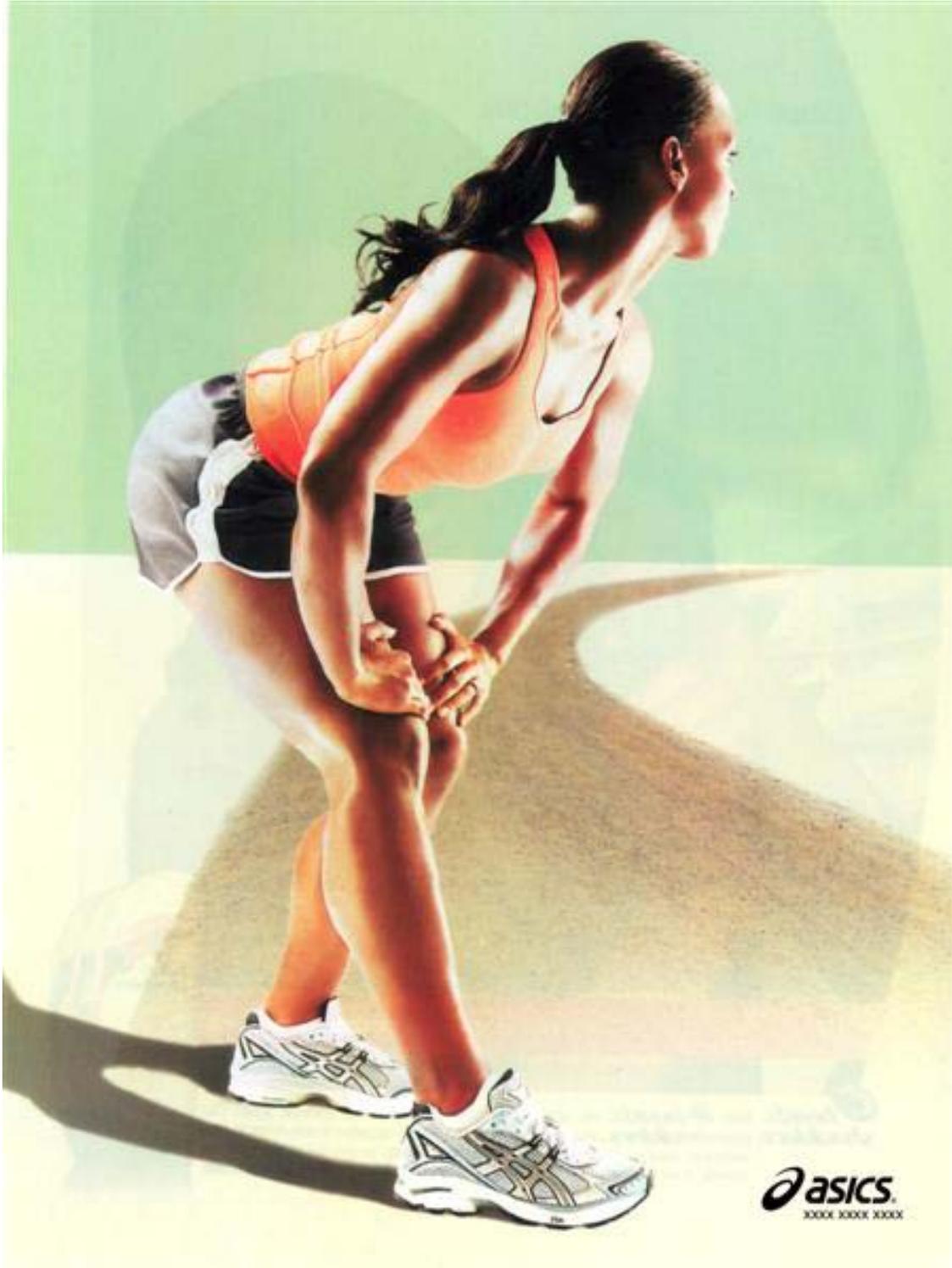
Ad 2 Neutral Model



Ad 2 Normal Model 1



Ad 2 Normal Model 2



Ad 3 Thin Model 2



Ad 3 Thin Model 1



Ad 3 Neutral Model



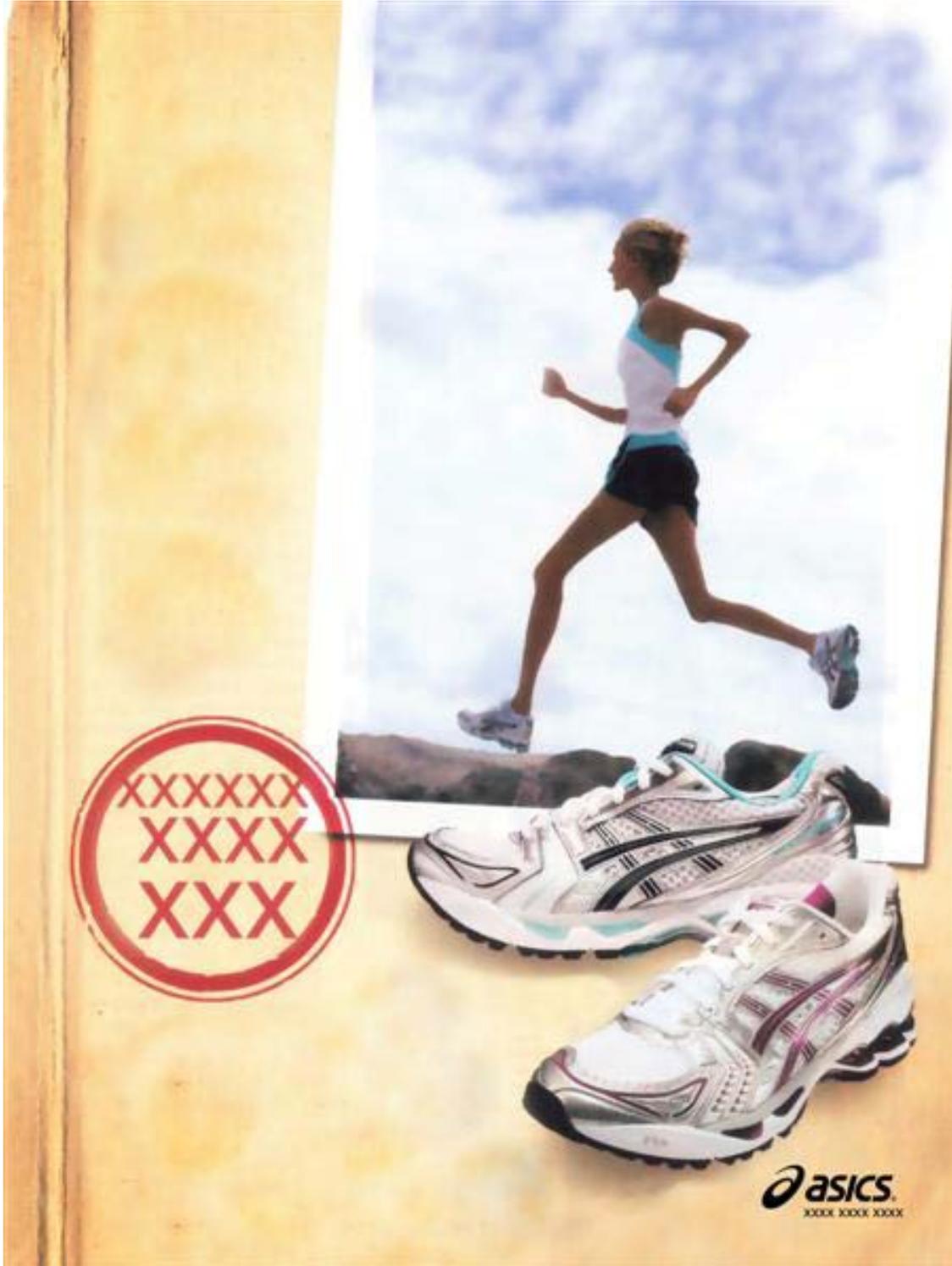
Ad 3 Normal Model 1



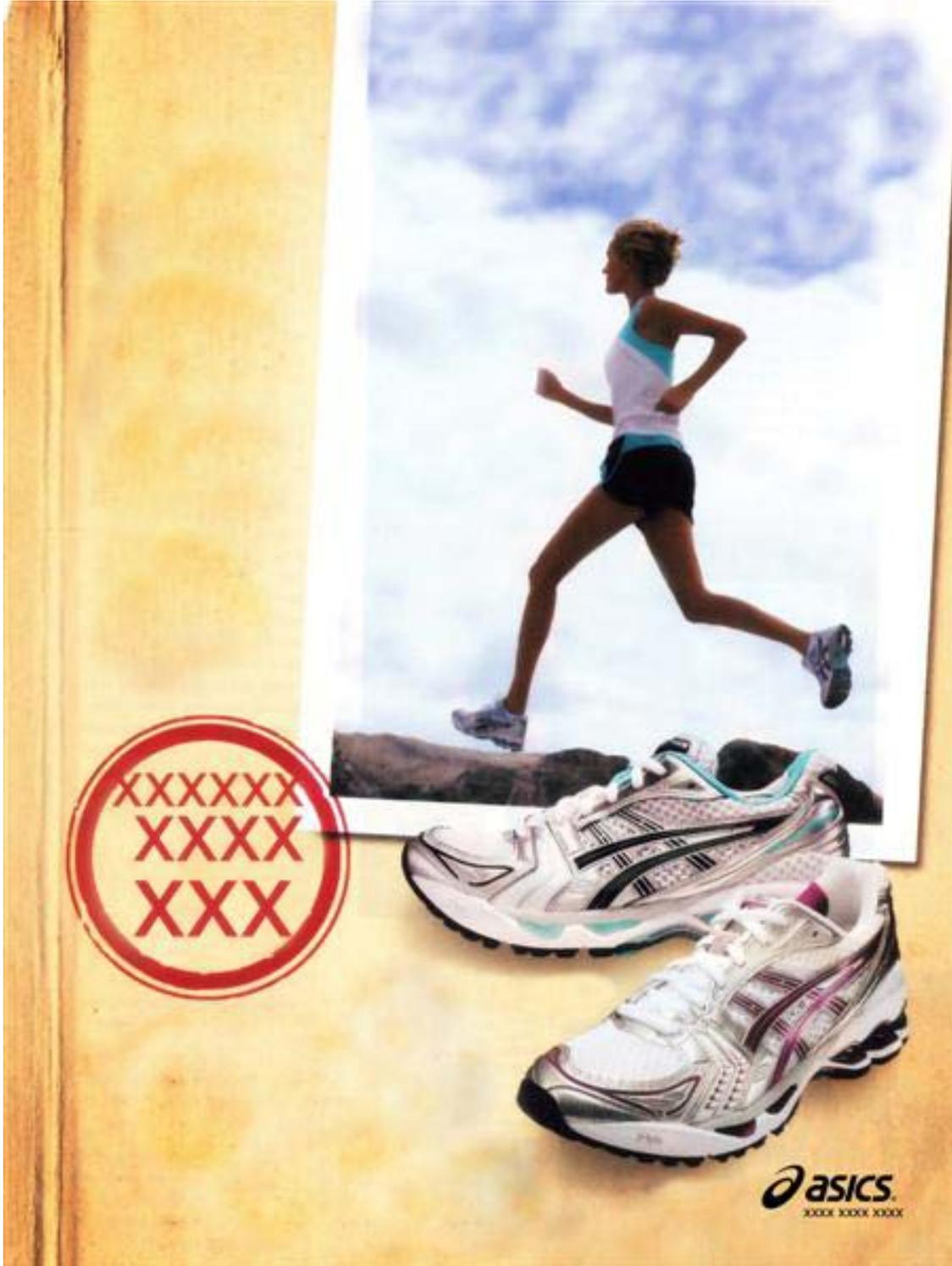
Ad 3 Normal Model 2



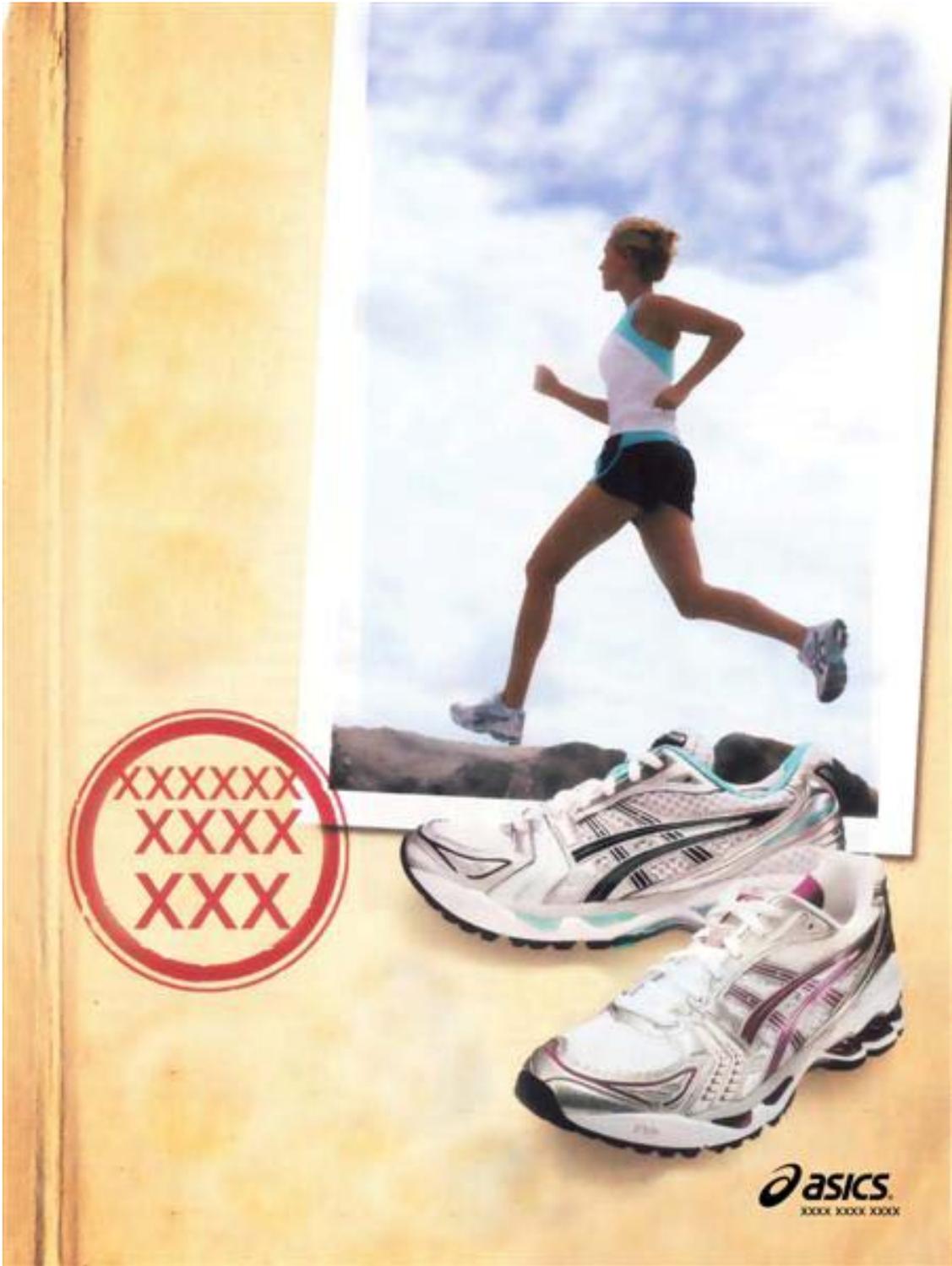
Ad 4 Thin Model 2



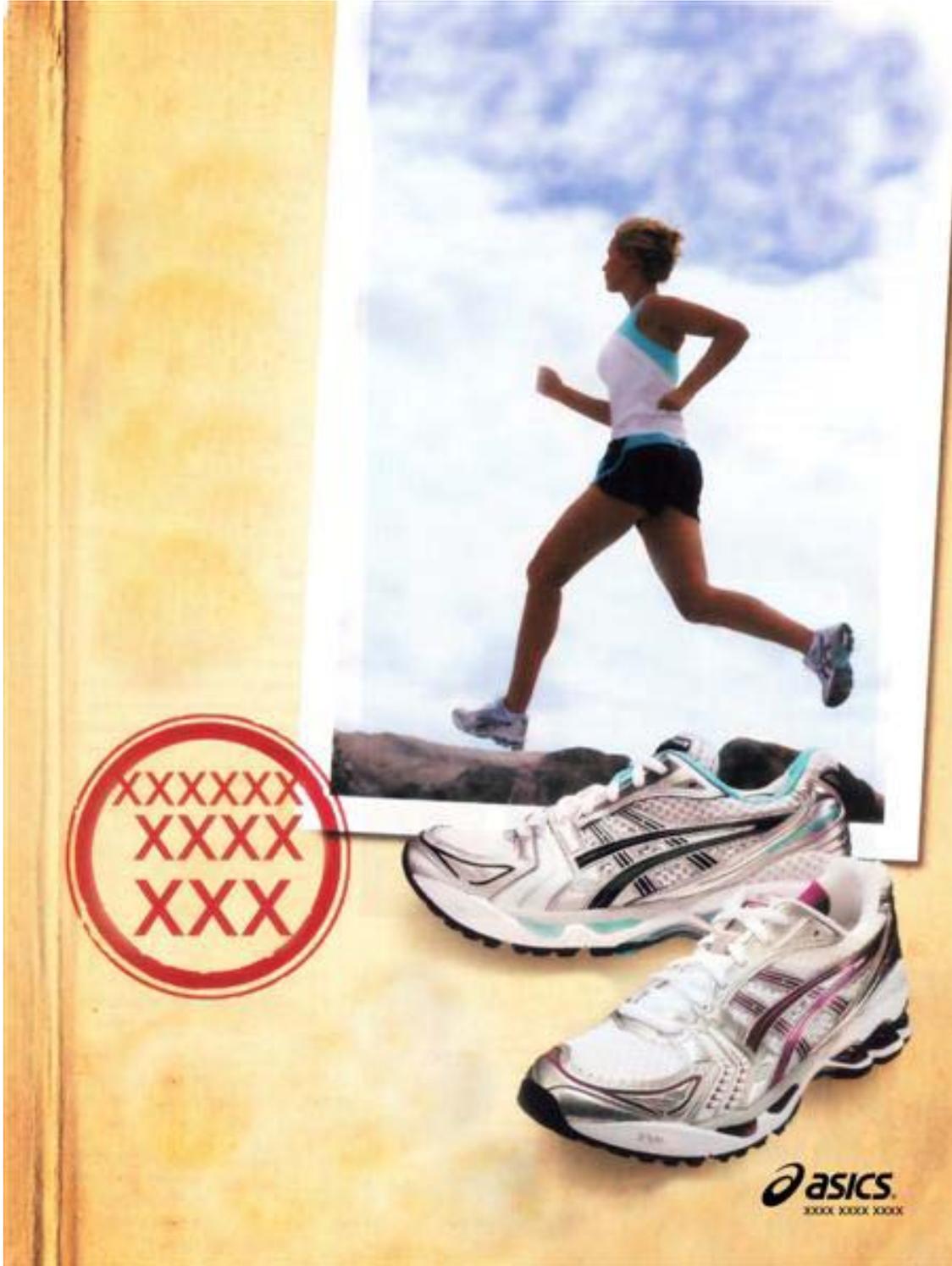
Ad 4 Thin Model 1



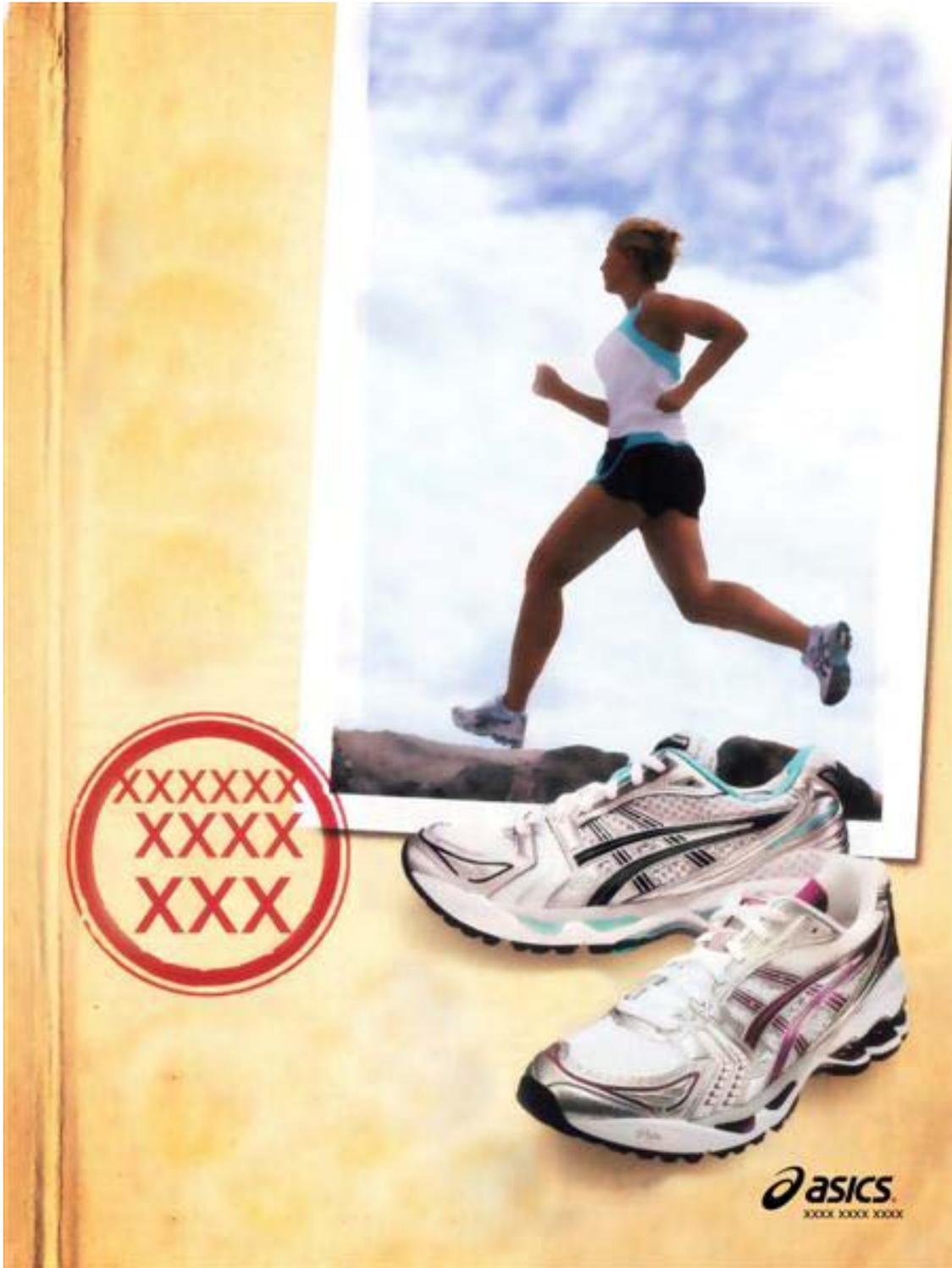
Ad 4 Neutral Model



Ad 4 Normal Model 1



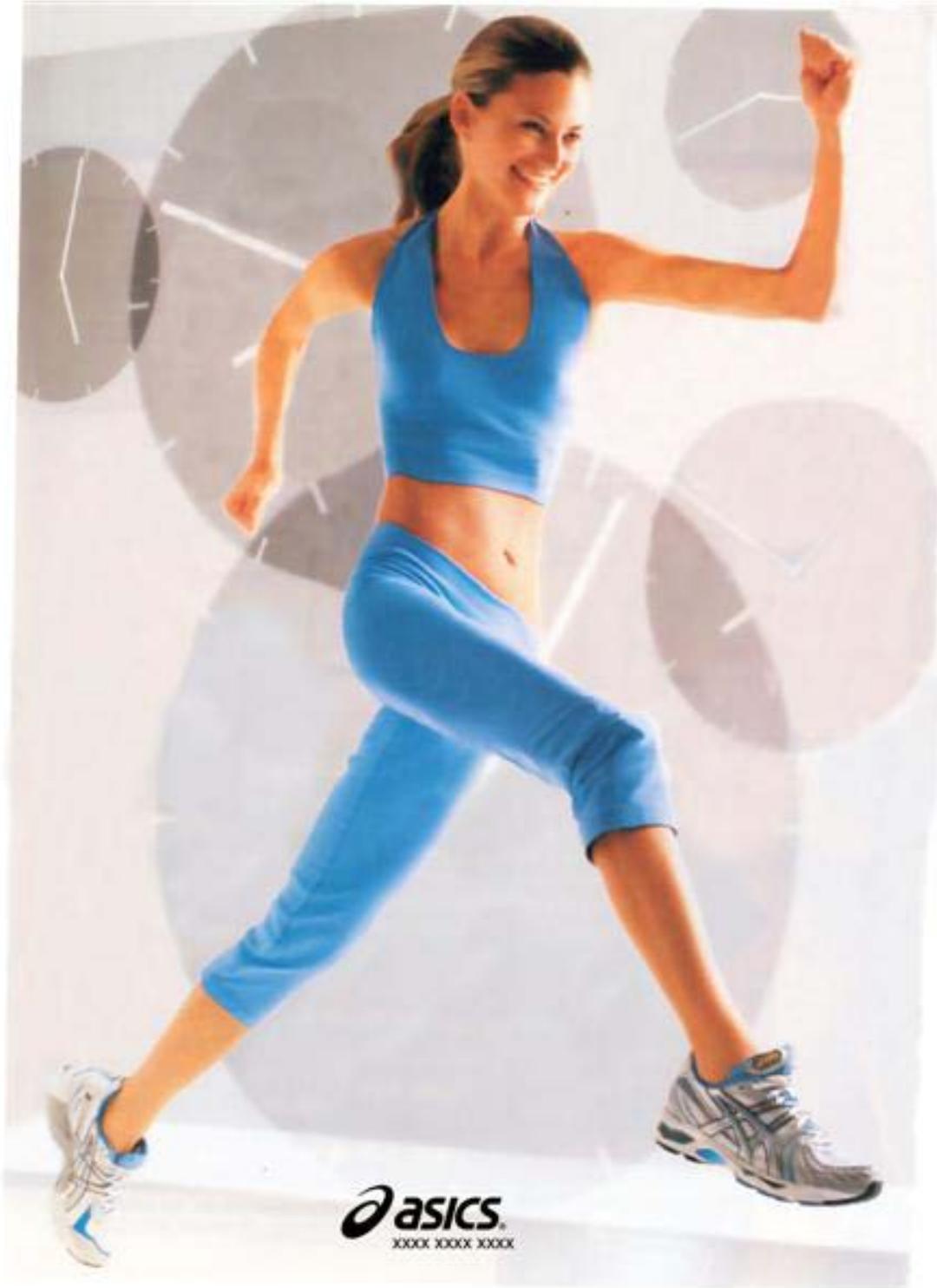
Ad 4 Normal Model 2



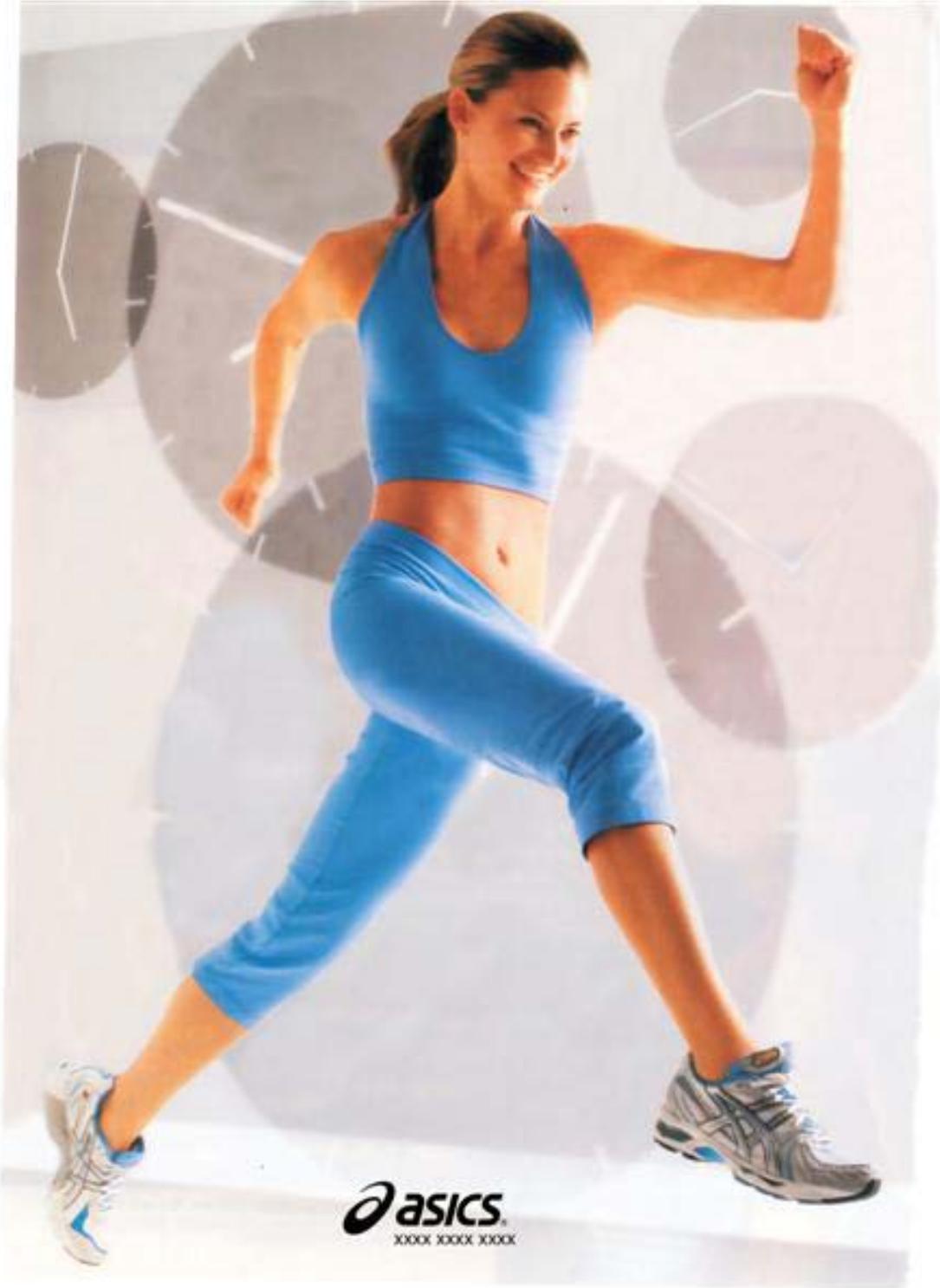
Ad 5 Thin Model 2



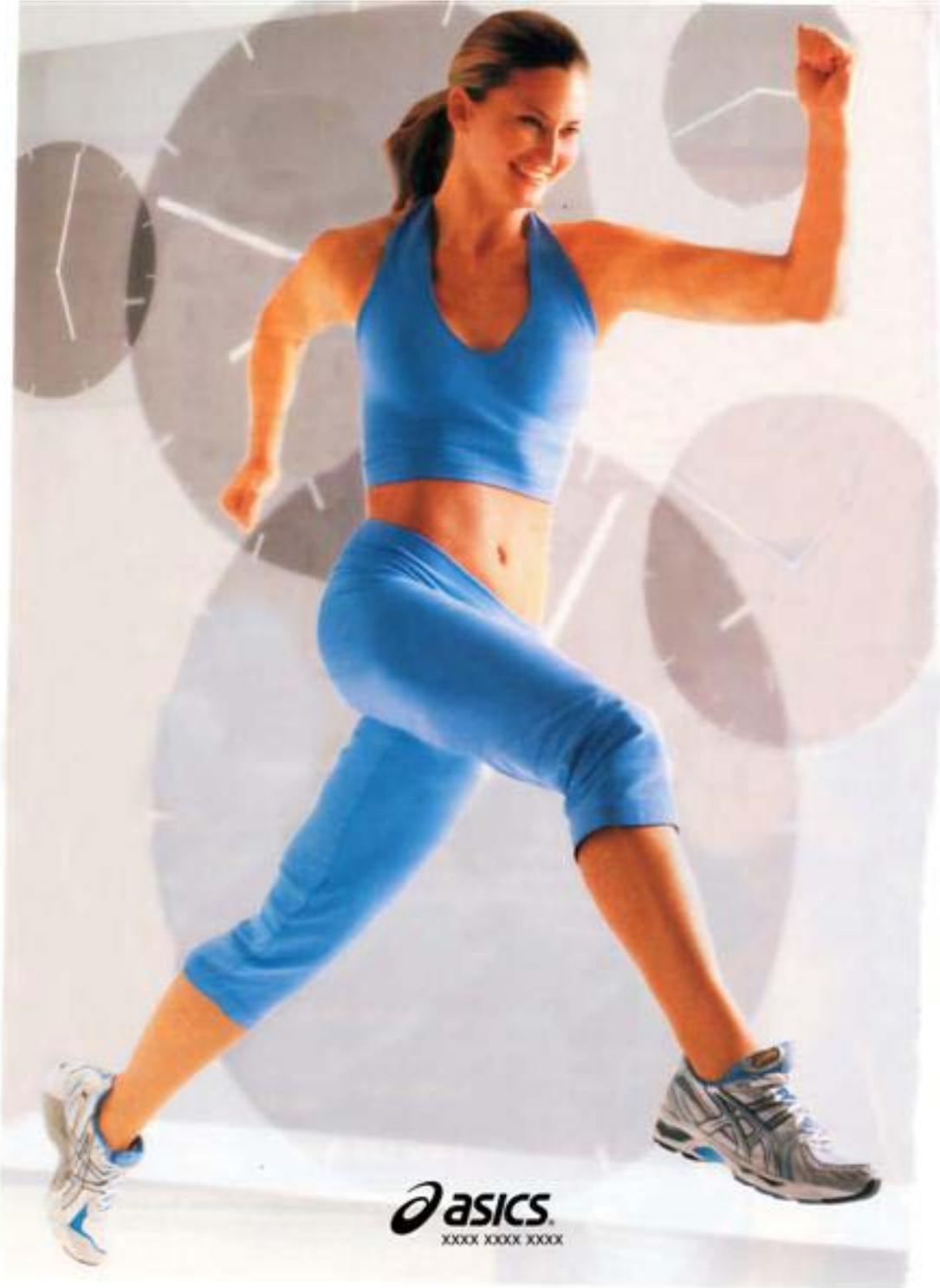
Ad 5 Thin Model 1



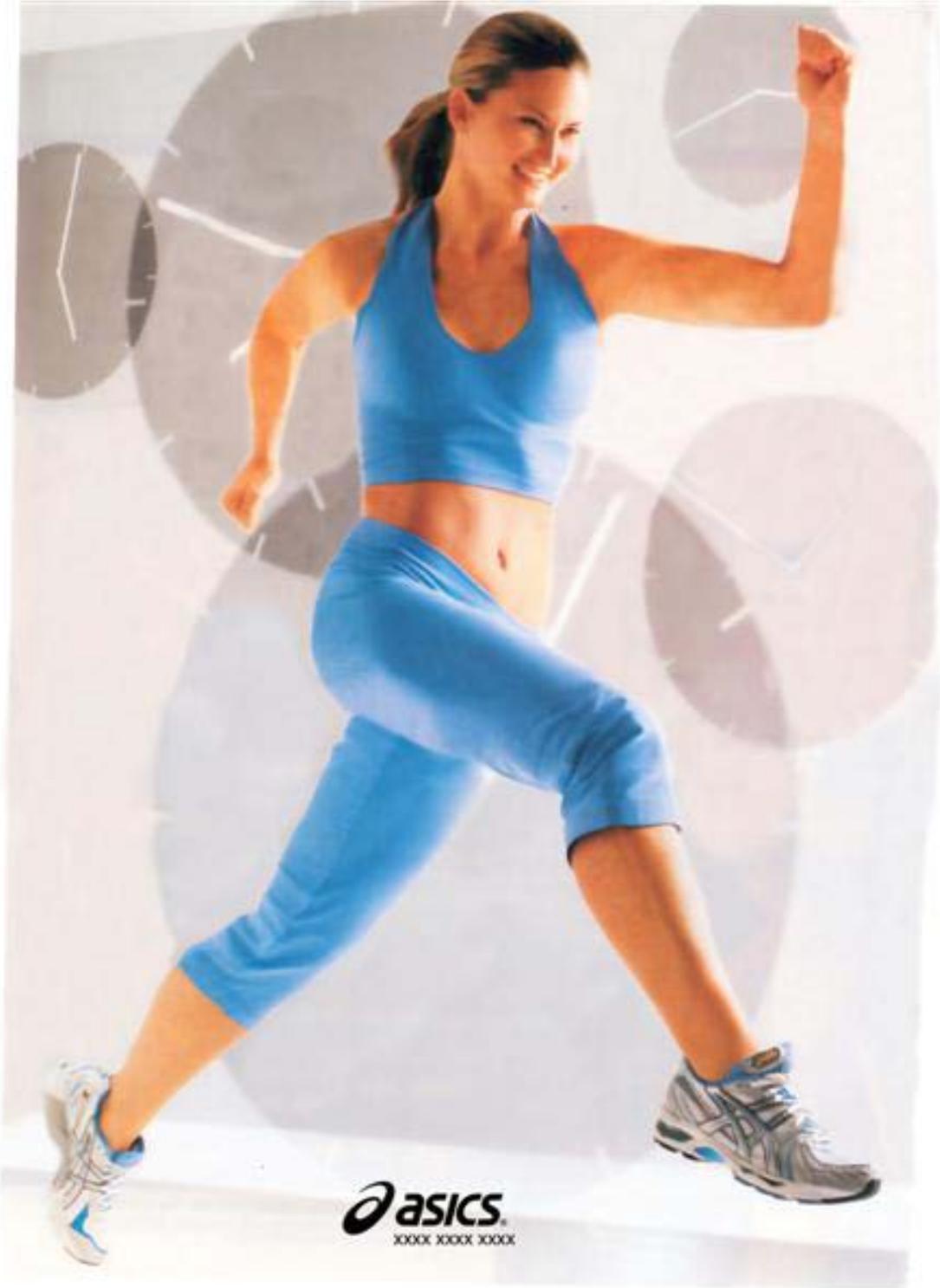
Ad 5 Neutral Model



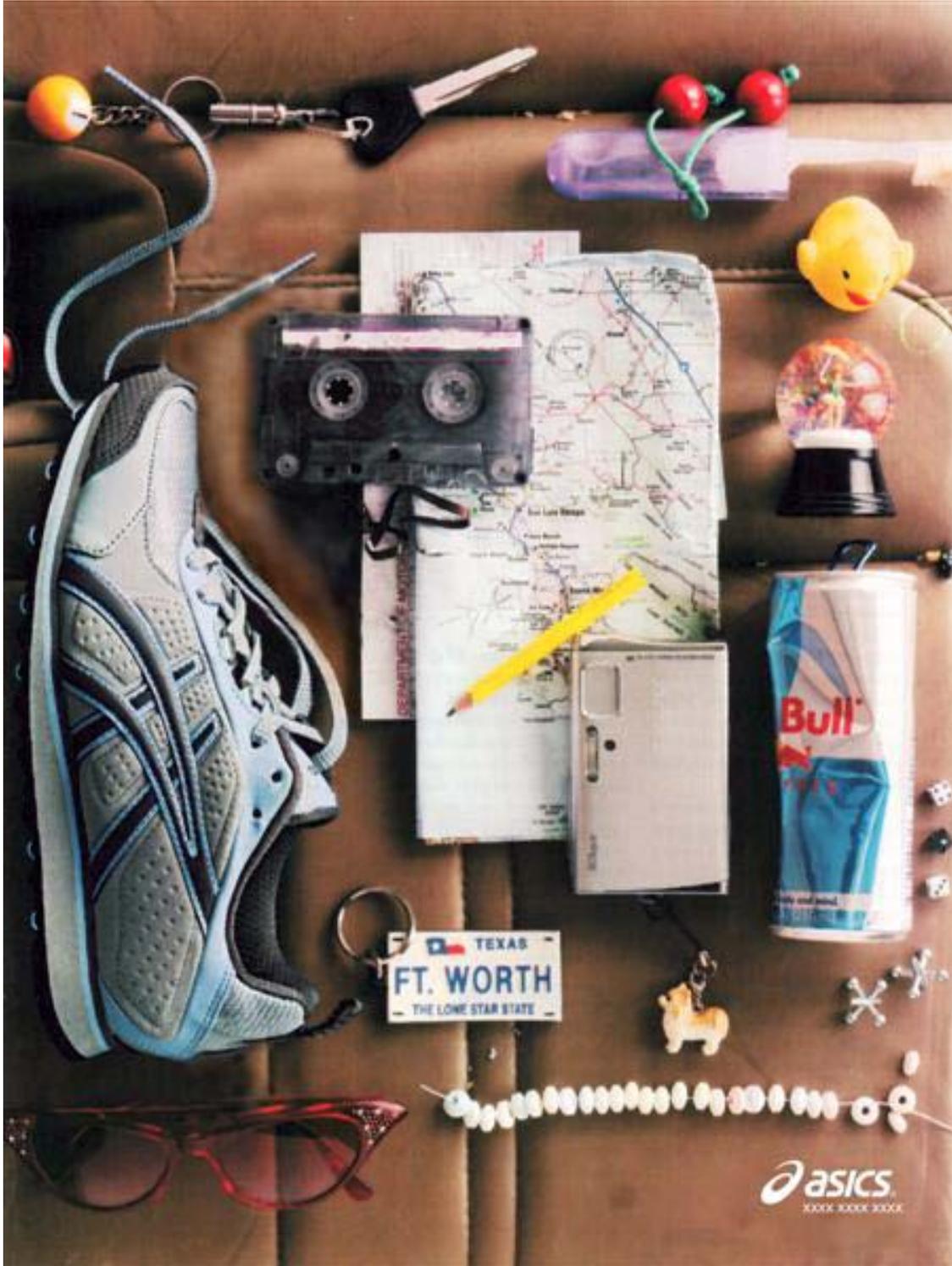
Ad 5 Normal Model 1



Ad 5 Normal Model 2

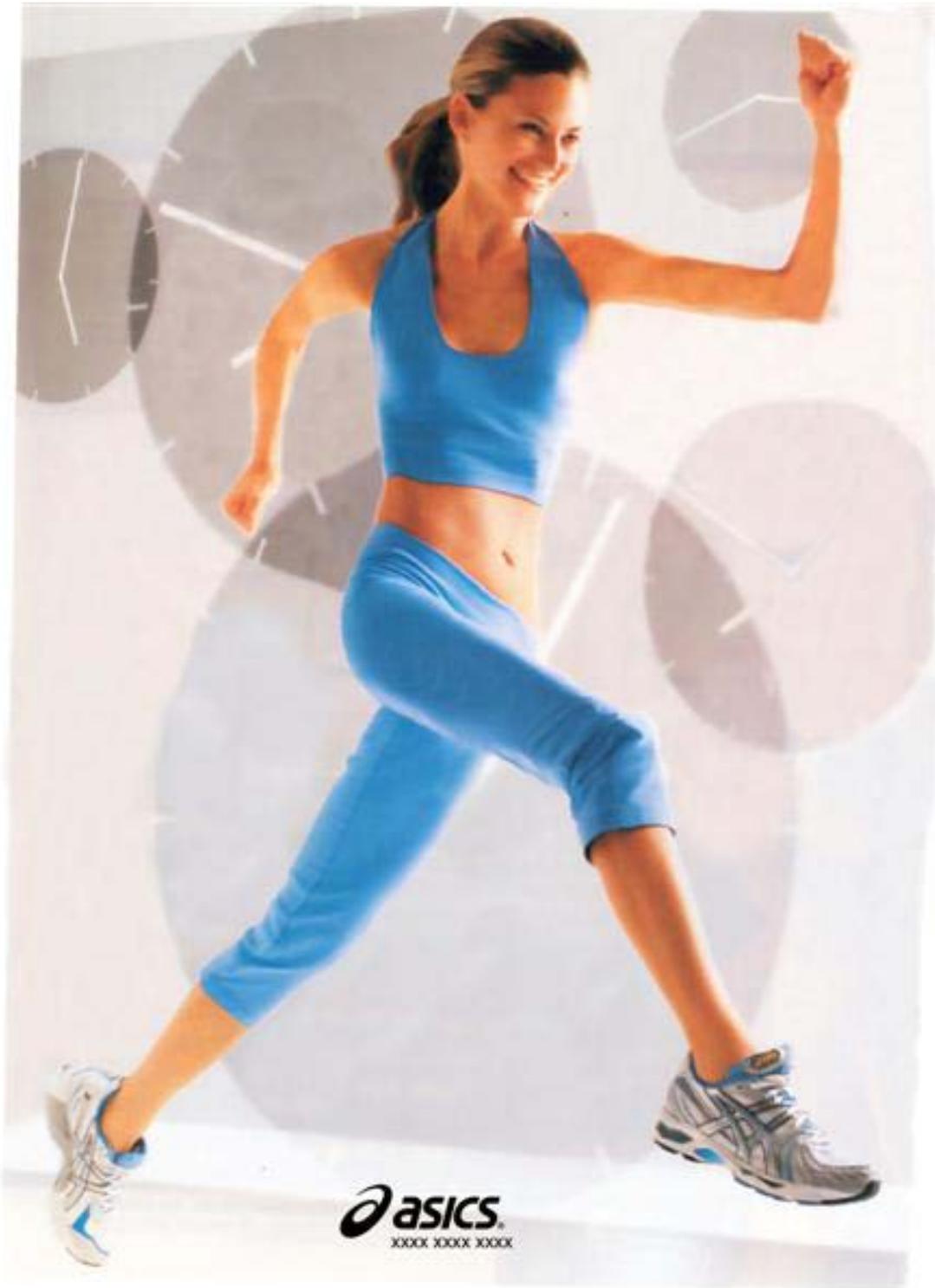


Control

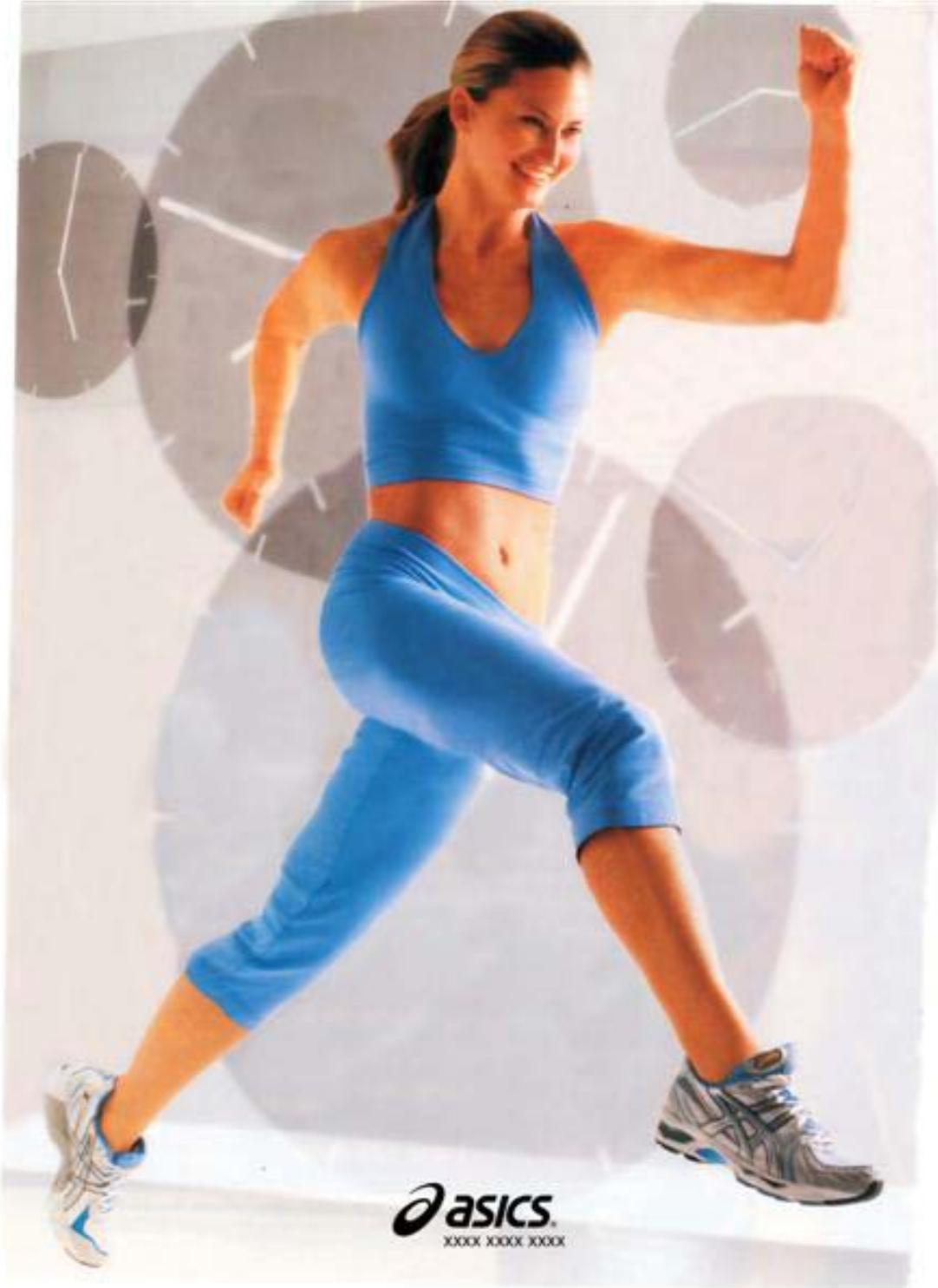


APPENDIX F
MAIN EXPERIMENT STIMULI

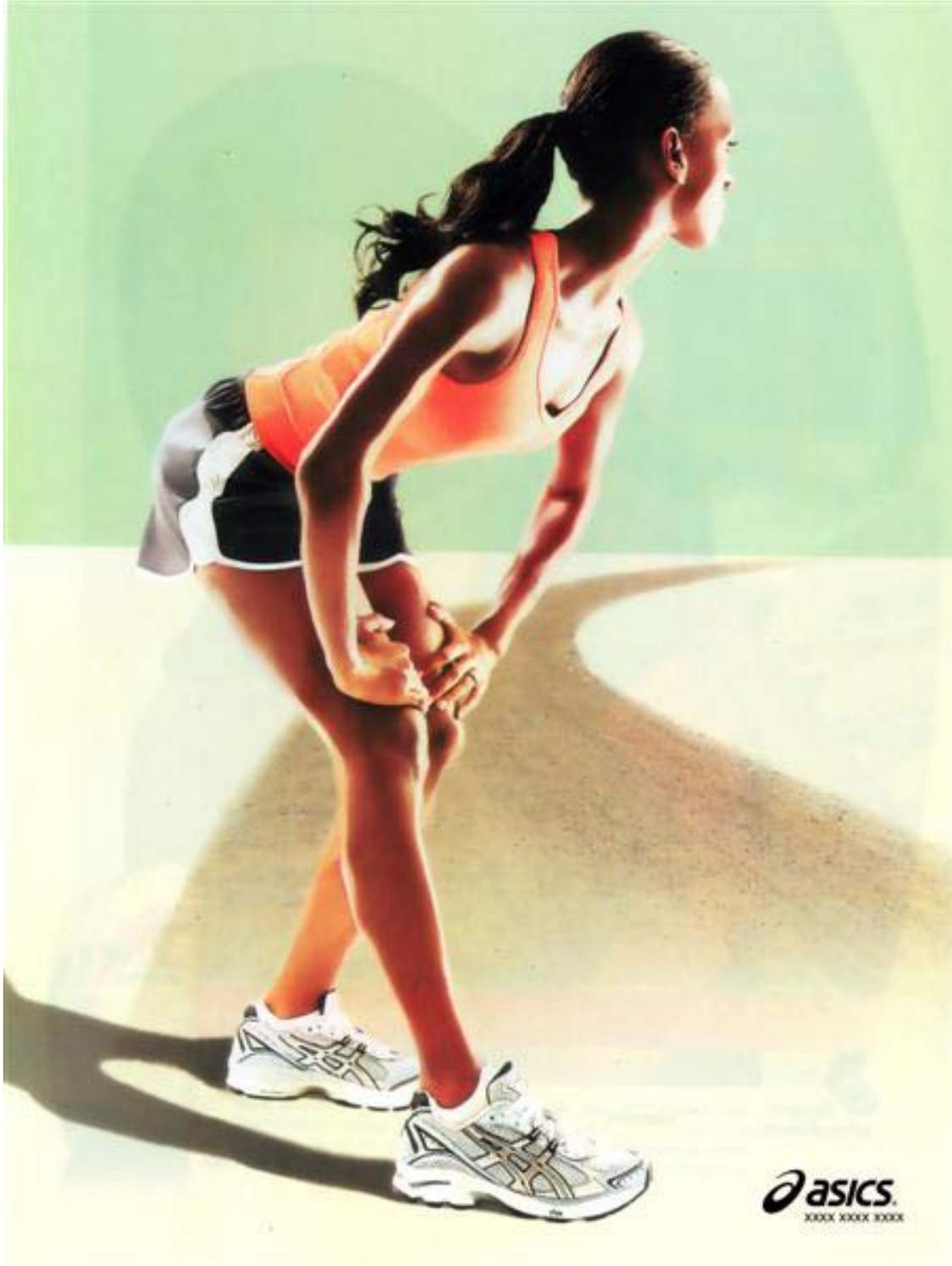
Target Ad 1



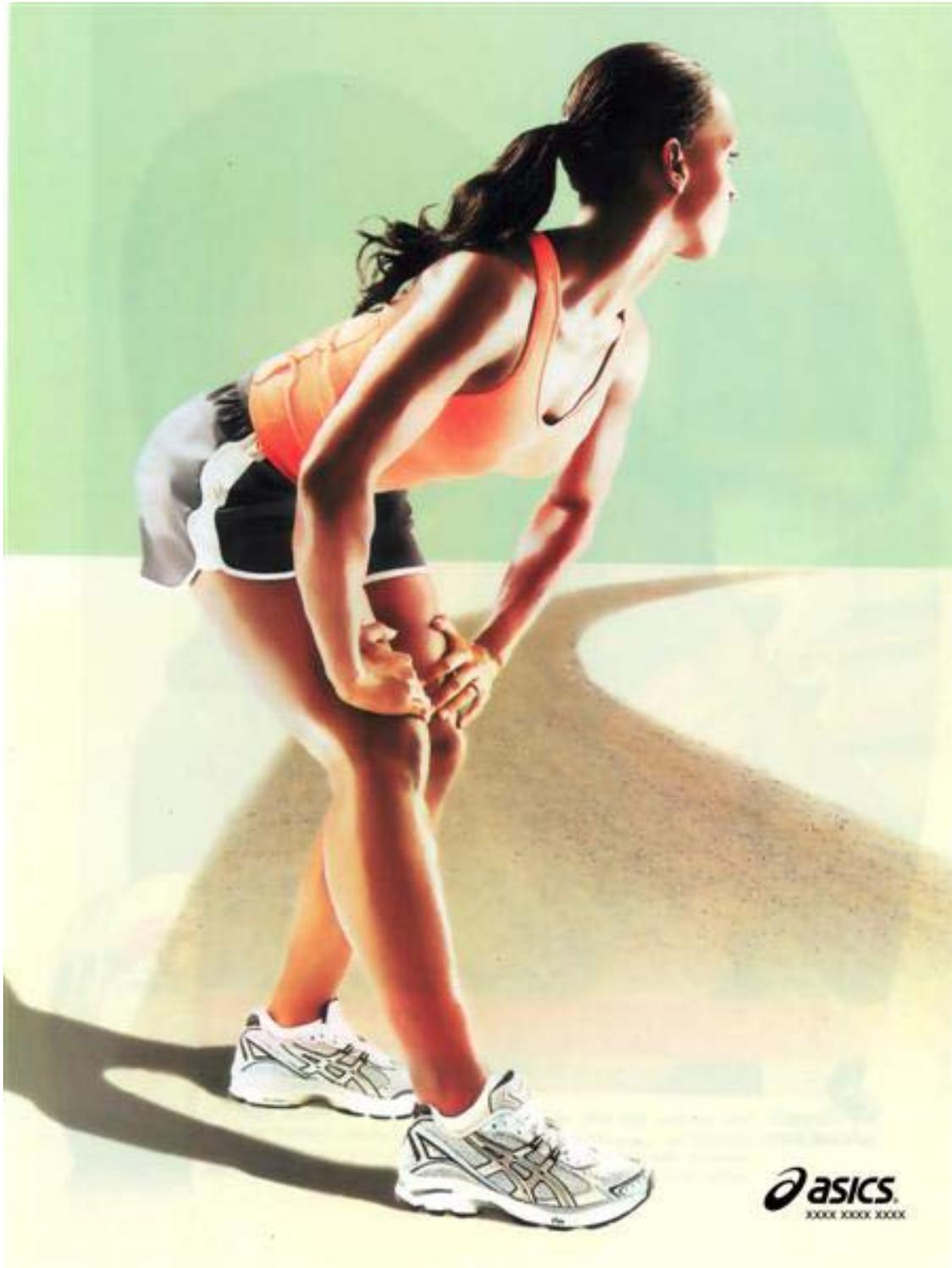
Target Ad 2



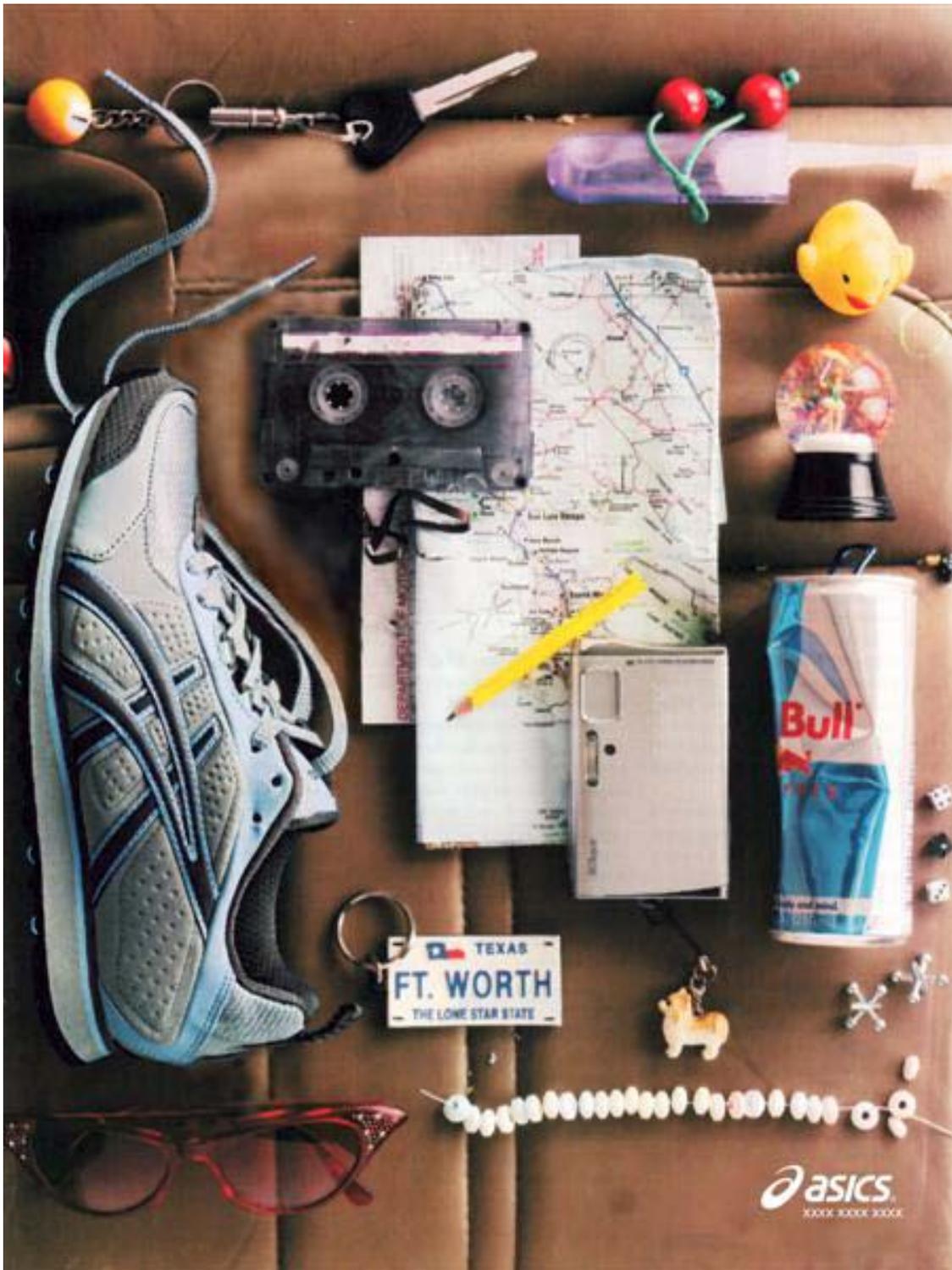
Target Ad 3



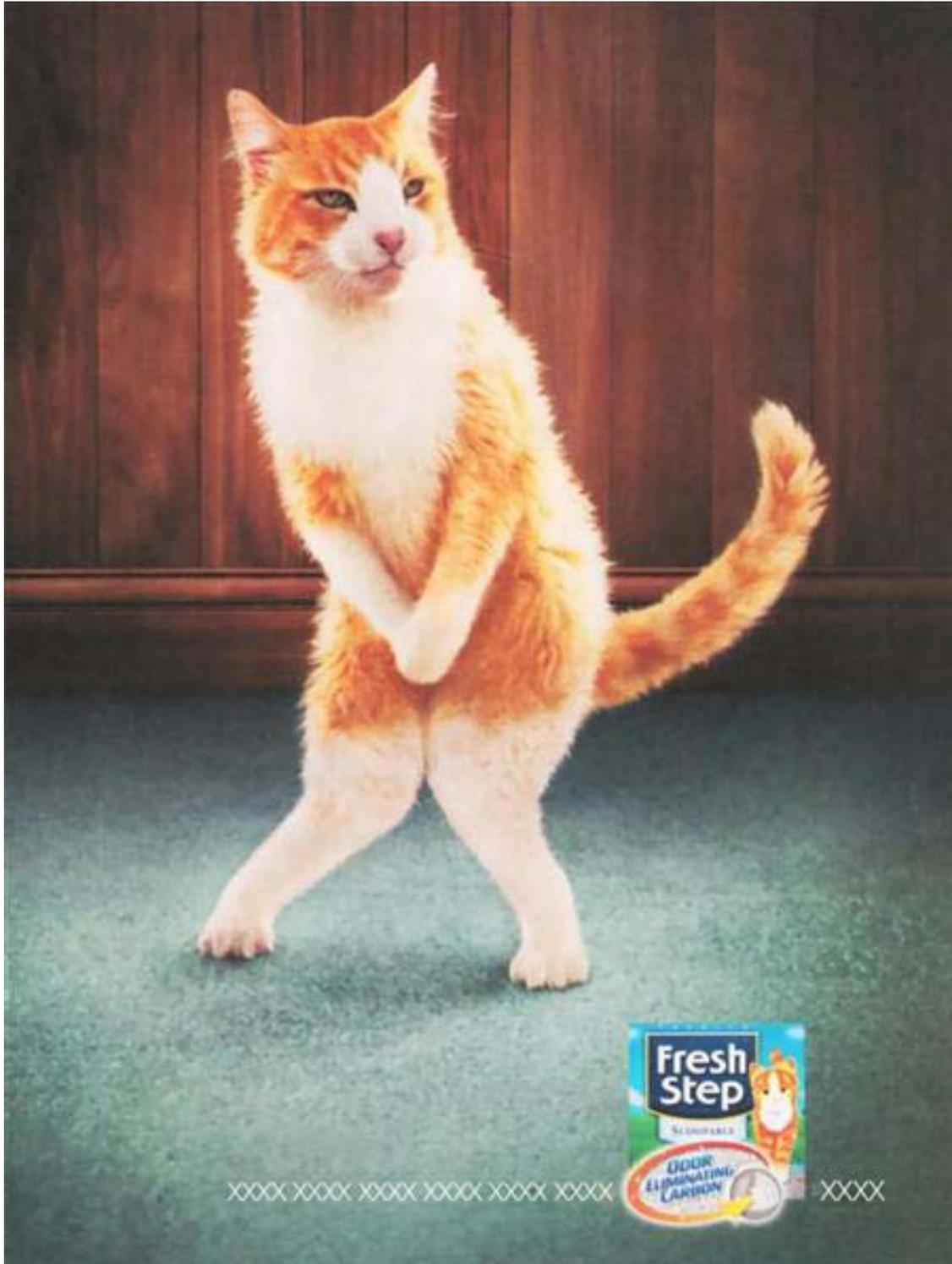
Target Ad 4



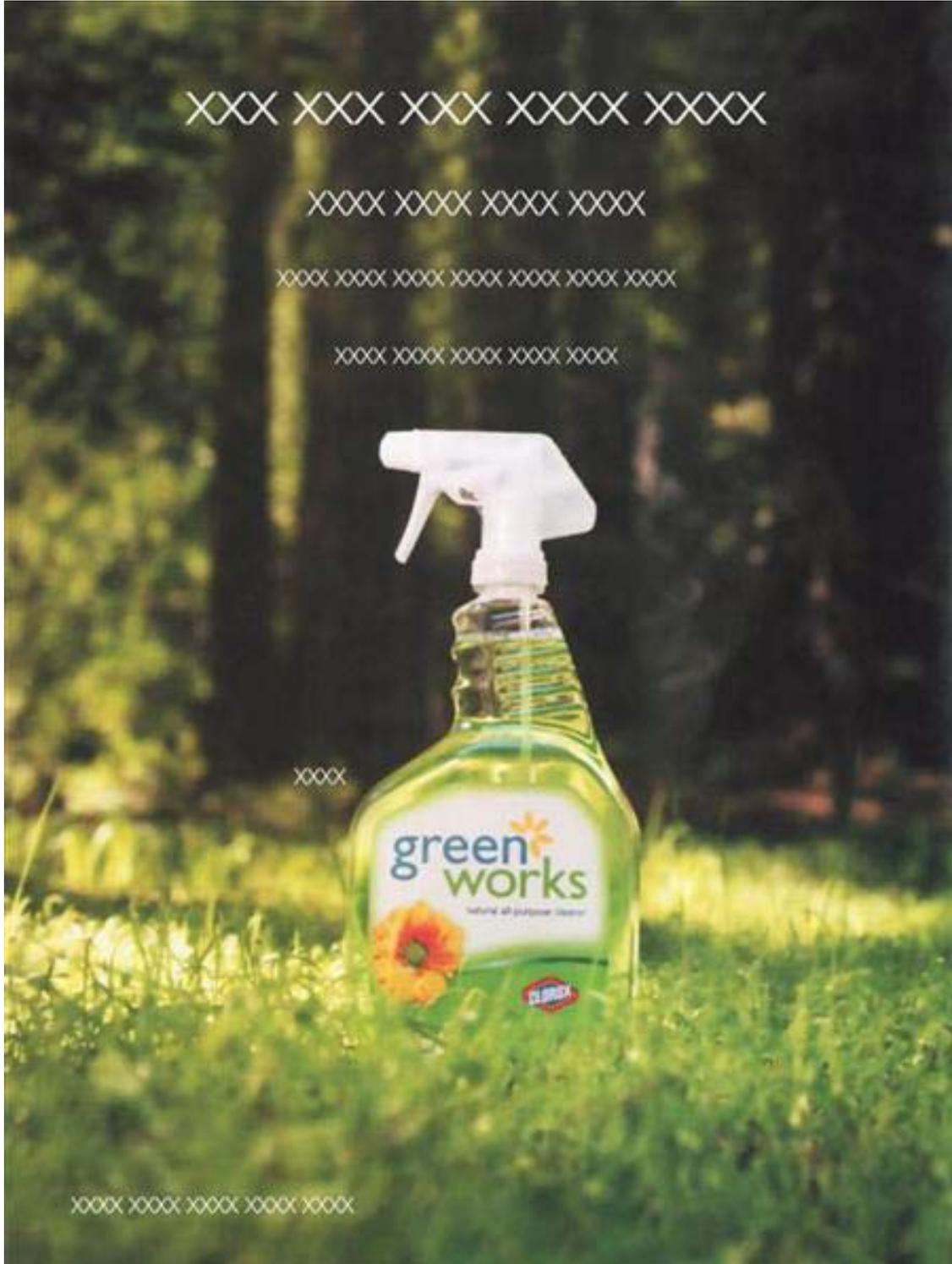
Target Ad 5



Filler Ad 1



Filler Ad 2



Filler Ad 3



Filler Ad 4

167



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BIOGRAPHICAL SKETCH

Mari Luz Zapata Ramos completed her master's degree in Advertising at the University of Florida. Her research focused on the brand and health outcomes that society obtains from advertising. Mari Luz obtained a Bachelor's in Science in Business Administration in 2006 from the University of Puerto Rico at Mayagüez and completed several M.B.A. courses at the University of Puerto Rico at Rio Piedras.