THE IMPACT OF BREAST SIZE IN ADVERTISING AND BREAST SIZE SATISFACTION ON ATTITUDE TOWARD THE AD, ATTITUDE TOWARD THE BRAND AND PURCHASE INTENTION

By

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To my family and friends, thank you for all your support- I love you
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THE IMPACT OF BREAST SIZE IN ADVERTISING AND BREAST SIZE SATISFACTION ON ATTITUDE TOWARD THE AD, ATTITUDE TOWARD THE BRAND AND PURCHASE INTENTION

By

Melanie Gayle York

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Chair: Dr. Robyn Goodman
Major: Advertising

With the continuous increase in breast augmentation surgeries, accompanied by numerous women’s dissatisfaction with their current breast size, it is beneficial to consider the impact model breast size in advertisements, as well as breast size satisfaction, may have on consumers. Therefore, the present study was undertaken to explore the effects of varying breast sizes in a print advertisement and women’s breast size satisfaction on a their attitude toward the ad, attitude toward the brand and purchase intention.

A sample of 89 undergraduate female students, ages 18 to 23, participated in a posttest only, 2 x 2, between-subject experiment. They were asked to complete a questionnaire measuring the impact of small- and large-breasted models in advertising, and a multivariate analysis of variance, MANOVA, was used to analyze the results.

College-aged female students who were exposed to an advertisement featuring a model with large breast-to-body ratio did not exhibit any different characteristics than students exposed to an advertisement featuring a model with small breast-to-body ratio. Overall, there was no significant difference in attitude toward the ad, attitude toward the brand or purchase intention. Additionally, female students who were dissatisfied with their breast size (i.e., desired larger
breast) did not exhibit any different characteristics than students who were satisfied with their breast size. Overall, there was no significant difference in attitude toward the ad, attitude toward the brand or purchase intention.
CHAPTER 1
INTRODUCTION

Overview

“Today the average woman compares her genetic physical endowments with a few hand-picked models. Despite their surreal beauty, the media insist that their beauty is attainable through hard work and effort and buying the right product.” (Etcoff, 1999, p. 69)

Women are continuously bombarded by media, including advertisements, featuring a naturally unobtainable beauty standard of a thin woman with large breasts (Sullivan, 2001; Owen & Laurel-Seller, 2000; Mazur, 1986; Cusumano & Thompson, 1997), but little is known about how women are affected by exposure to these mass-mediated images. Therefore, this study’s purpose is to determine if a causal relationship exists between the size of a model’s breast and women’s breast size satisfaction, and how women perceive advertisements, brands and resulting purchasing behaviors.

Multiple studies affirm that medium breast size, or a C cup, leads to the highest breast size satisfaction (Harrison, 2003; Kleinke & Staneski, 1980) and receives the most favorable ratings from both sexes when compared to smaller or larger breasts (Kleinke & Staneski, 1980). Furthermore, there are many women who prefer breasts larger than their current size (Tantleff-Dunn, 2002), and, overall, there are a number of women who are simply dissatisfied with their current breast size (Thompson, Heinberg, Altabe & Tantleff-Dunn, 2001; Sarwer, Bartlett, Bucky, LaRossa, Low, Pertschuk, Wadden & Whitaker, 1998). For example, a 1996 Self magazine survey of 4,000 women discovered that more than half would change their breast size if it was possible (Grant, 1996). Another survey revealed that 34% of women dislike their breasts, which is a 10% increase from 20 years ago (Thompson et al., 2001; Sarwer et al., 1998). This dissatisfaction may possibly be reflected in the continual increase in the number of breast
augmentation surgeries performed each year, especially since 91% of breast augmentation patients cite the procedure as a way to improve how they feel about themselves (American Society of Plastic Surgeons (ASPS), 2008).

While the desire for bigger breasts and overall breast satisfaction may be the result of many factors, research demonstrates that the media are likely a contributor to breast size dissatisfaction (Richens, 1991; Sarwer et al., 1998; Harrison, 2003; Cusumano & Thompson, 1997; Underwood, 2000; Garner, 1997). First, women compare themselves to the media, and the media often act as a major influence in breast size satisfaction (Latteier, 1998). Furthermore, the media portray a disproportionate body as the ideal—a woman with a size ten chest, size four waist, and size six hips (Furnham, Adrian, Dias, Melanie, & McClelland, Alastair, 1998). Because breast size and total body fat are related, women cannot naturally attain media’s standard of beauty—a thin body frame with medium-sized breasts. It is impossible to lose weight to achieve the thin body standard without negatively affecting breast size, so most women would need to undergo plastic surgery to meet the media’s ideal standard of beauty (Harrison, 2003).

Reinforcing the idea that women are resorting to cosmetic surgery for breast satisfaction, the American Society of Plastic Surgeons claims a 64% increase in breast augmentation procedures from 2000 to 2007. Breast augmentation was the leading procedure with 347,500 performed in 2007 alone. Moreover, there is controversy surrounding the safety and health repercussions of implants. Not only do potential dangers lie in the actual use of saline implants, but the effect of cosmetic surgery on the body’s ability to articulate and communicate to the self has been questioned (Brooks, 2004). Additionally, breast augmentation is a major surgery with lengthy recovery time that can result in a decrease in nipple sensitivity, hardening of the breast,
and a need to replace the implants multiple times (FDA, 2004). Regardless of these risks, the number of women undergoing breast augmentation continues to increase each year (ASPS, 2008). These facts demonstrate the potential danger in some women’s dissatisfaction with their breast size.

Although many women are highly dissatisfied with their breast size and women are constantly exposed to an ideal of small body frame with large breast size (Latteier, 1998; Owen & Laurel-Seller, 2000; Cusumano & Thompson, 1997; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Waller & Shaw, 1994), not all women pursue breast augmentation. Thus, it can be assumed that the mediated ideal does not similarly affect all women. However, this study seeks to determine if women of similar demographics react differently to advertisements featuring a model with large breast size versus an advertisement featuring a model with small breast size, and to discover if the difference in breast size, as well as individual breast size satisfaction, impacts the participant’s attitude toward the ad, attitude toward the brand and purchase intention.

When a woman is dissatisfied with her breast size and views an advertisement featuring a model with larger breasts and a thin body frame, the visual image may conjure negative emotions regarding self-image in the consumer. She may then convey these negative feelings about herself onto the advertisement. Since the advertisement is promoting a specific unknown brand, the negative connotations associated with the advertisement could be relayed to the brand (Phelps & Thorson, 1991). Multiple studies have shown the significance of attitude toward the ad in understanding the effects of advertising (Holbrook, 1978; Mitchell and Olson, 1981) and that attitude toward the ad acts as a moderator of consumer’s brand preferences and their resulting purchasing behaviors (Batra, 1984; Batra & Ray, 1983; Holbrook, 1978; MacKenzie, Lutz & Belch, 1986; MacKenzie & Lutz, 1983; Mitchell & Olson, 1981; Moore & Hutchinson, 1983;
Shimp, 1981; Zinkham, Gelb, & Martin, 1983). Because of negative feelings toward both the advertisement and the brand, the consumer may then alter her purchasing behaviors based on these emotions (Gresham & Shimp, 1985; Cox & Locander, 1987; Moore & Hutchinson, 1983), which could potentially result in her unwillingness to include a product in her consideration set and the eventual loss of a consumer. As a result, advertisers must be careful in their use of models with disproportionate breast size.

However, advertisers may want their advertisements and brands to conjure such negative emotions. These negative emotions may positively impact the consumer’s attitude toward the ad and the brand because the consumer may feel that the brand that is advertised can help to fix what is causing the negative emotion (Derbaix, 1995). For example, an advertisement for a push-up bra may show a model with extremely large breasts on a very thin frame, which may create negative emotions in a woman dissatisfied with her breasts. These negative emotions may result in the woman thinking that the only way to achieve this ideal breast is to purchase the push-up bra; therefore, the negative emotions have resulted in favorable purchasing behaviors for the advertiser.

Thus, it must be determined whether a woman who is extremely unhappy with her body, particularly her breast size, will project these feelings onto an advertisement or brand and will it result in different purchasing behaviors. This study also focuses on how to portray model breast size in advertising in order to improve female consumers’ attitudes toward the ad and the brand, and to also increase consumer purchasing intention. The findings of my research will help advertisers better understand how breast size in advertising works.

**Significance of Study**

To date, there is no body of academic research available that discusses the impact of varying breast sizes in advertising. It is not known how women interact with breast size in
advertising or how they react toward advertisements containing large- and small-breasted
women. Given the use of large breasts on thin bodies (Owen & Laurel-Seller, 2000; Cusumano
& Thompson, 1997), the level of breast dissatisfaction in women (Thompson, Heinberg, Altabe
& Tantleff-Dunn, 2001; Sarwer, Wadden, Pertschuk, & Whitaker, 1998), and the increase in
breast augmentation procedures (ASPS, 2008), it is important to delve into this area of research
so advertisers understand how breast size affects feelings toward both the advertisement and the
brand, as well as how these feelings may alter purchasing behaviors.

Study Organization

First, a brief review of relevant literature will be provided in order to achieve an
understanding of the various constructs that support this study and offer a general overview of
the current, albeit limited, knowledge on breast size in the media. Based on the literature review,
Chapter 2 will conclude with the presentation of research questions and hypotheses to guide the
remainder of the research. Additionally, theoretical models will be developed and explained.
Chapter 3 presents the experimental method employed in this study. The research design and
procedure is discussed, including specifics surrounding experimental design, stimuli and
recruiting respondents. Chapter 4 reports the study’s findings, while Chapter 5 presents
conclusions, industry implications, limitations of this study and recommendations for future
research.
CHAPTER 2
LITERATURE REVIEW

While there are few studies exploring the influence of the media, particularly advertising, on women’s breast size (Goodman & Walsh-Childers, 2004), this chapter reviews the limited available literature concerning the relationship between breast size in advertising and women, as well as applicable theoretical approaches. It employs literature pertaining to the current breast ideal, how it is displayed in the media and the resulting impact on women. The purpose of this review is to provide a map of previous research in which the present study fits, as well as a rationale for the variables used in the study. It also presents a critique of the literature in order to illustrate how this study contributes to the general knowledge of the present topic.

Women’s dissatisfaction with their breasts. According to multiple studies, many women today are dissatisfied with their breasts (Thompson, Heinberg, Altabe & Tantleff-Dunn, 2001; Sarwer, Wadden, Pertschuk, & Whitaker, 1998). A nationwide body satisfaction survey conducted in 1997 cited 34% of respondents as unhappy with their breasts (Sarwer, et al., 1998), while a breast satisfaction survey conducted by Self magazine found that more than half of the 4,000 respondents would alter their breast size if possible (Grant, 1996). According to the American Society of Plastic Surgeons, women are so dissatisfied with their breast that they are resorting to cosmetic surgery to fix the problem. The group conducted a study as to why women choose various surgical breast procedures and concluded that 91% of patients cited breast augmentation procedures as a method of improving self-esteem. These same patients also declared themselves as the driving force behind the decision to pursue cosmetic surgery rather than outside influences.
The large number of women dissatisfied with their breasts may be a result of the breast playing a very public role, as well as the overall importance that breasts play in a woman’s life. For women, it seems that

American society is particularly obsessed with breasts, and that society, by overemphasizing women’s breasts as symbols of femininity, sexuality and eroticism, and by promulgating unrealistic standards, is encouraging women to assess their self-worth by the appearance of their breasts. (Koff & Benavage, 1998, p. 671)

According to multiple authors including Brownmiller (1984) and Latteier (1998), breasts are viewed as a source of many different things. Because of their visibility to others, they are often viewed as a source of a woman’s sexuality and can result in pride and self-satisfaction, but they can also be a site of insecurity, shame or competition. As Latteier (1998) says, “My body is a quantity to be judged by others who draw conclusions about me based on what they see.”

Reinforcing the idea of breasts as the most public part of a woman’s body is the fact that breasts are referenced as “public institutions” and “public edifices” (Latteier, 1998, p. 111 & p. 20). According to Blum (2003), “Breasts, which are an integral part of the public spectacle of femininity, are in many ways foreign to or separable from the bodies that possess them—even naturally” (p. 33). Both sexes are comfortable openly evaluating their own and other women’s breasts, with particular attention paid to breast size (Latteier, 1998). Research suggests that women are aware of this, and their body image is impacted as a result (Koff & Benavage, 1998). Additionally, breasts being such a public part of a woman’s body results in breasts having a greater impact on how a woman feels about her body and her overall self-esteem more than other body parts (Koff & Benavage, 1998).

The ideal breast. With such a large amount of research identifying the fact that many women are dissatisfied with their breasts, the issue of what is the ideal breast must be addressed. According to Latteier (1998), “media imagery communicates quite clearly that the best breast—
the breast as it should be— is the adolescent breast. It is a firm, milky white globe. The nipple is smooth, not the lumpy, bumpy nipple of women who have nursed a baby or outlived their youth” (p. 6).

In America, the 36 C cup is the highest selling bra size (Kim, 2001), and the C cup is considered to be the ideal breast size across many races, cultural and socioeconomic lines (Koff & Benavage, 1998). Reinforcing the current dominance of the C cup are recent statistics from the American Society of Plastic Surgeons citing that the majority of breast augmentation patients request a size C cup with an increasing number of patients preferring an even larger size (ASPS, 2008). The preference in cup size for patients under the age of 35 has remained a C since the 1980s; however, the second most popular cup size in the ‘80s was a B, while today’s second most requested cup size is now a D. Overall, research from Springen (2003) found that since the 1980s, the average size of breast implants has increased 40%.

Additionally, research has shown that while models are becoming thinner, their breast size is staying the same size, resulting in a disproportionate body-to-breast size ratio (Owen & Laurel-Seller, 2000). Owen and Laurel-Seller (2000) studied the measurements of Playboy centerfold models and commercial print models. The study showed that while both groups of women were exceptionally thin, the Playboy models were considered shapely because of their disproportionately large breast size. Goodman and Walsh-Childers (2004) evaluated research performed by Cusumano and Thompson (1997) and found that the average breast and body sizes of women in magazines often read by college-aged women featured visuals of thin models with moderately sized breasts. As a result, the students were looking at women with a disproportionate breast size in relation to their overall body size. With disproportionately large breast found throughout the media, qualitative research performed by Goodman and Walsh-
Childers (2004) also found that the idea of proportion was prominent in the minds of the participants in their focus groups. The participants wanted thin, toned bodies that were free from fat but desired a cup size of around a C, which is not proportionate.

While the participants in Goodman and Walsh-Childers’ research cite a disproportionate figure as their ideal, Lattier (1998) believes women know large breasts on a very thin body are not normal.

I believe that many women are aware that this image is a fantasy and that many of them intellectually reject it. They know better, but they cannot shake it off. Despite their disclaimers, at the moment of truth, when they look in the mirror at their naked breasts, they perceive that what they have, what they are, is not good enough. Their breasts are too long and pendulous or too flat or too saggy. The nipples are too big or too small or the wrong color. The two breasts are different sizes or different shapes. The reality is that breasts vary as widely as faces. But we see faces every day, and we know that. We do not see breasts, except mostly clothes and confined in a brassiere. It is every woman’s secret that hers are different. (p. 6)

**The ideal breast and what it suggests.** While the average breast implant size may continue to increase, bigger bust size comes with both positive and negative connotations. Large breasts are associated with sex appeal and attractiveness (Goodman & Walsh-Childers, 2004), as well as popularity, assertiveness and nurturing qualities (Koff & Benavage, 1998). Conversely, women with large breasts are also stereotyped as incompetent, unintelligent and immoral (Latteier, 1998) and thought to be hypersexual and socially deviant (Goodman & Walsh-Childers, 2004). Often times, if a woman “has large breasts, she is treated like a slut” (Latteier, 1998, p.10).

Women with small breasts also endure a myriad of stereotypes, such as being viewed as more intelligent and athletic (Koff & Benavage, 1998) but also conjure images of masculinity and asexuality (Goodman & Walsh-Childers, 2004). Additionally, “if a woman has small breasts, she falls short of being desirable” and is thought to be lacking in passion (Latteier, 1998, p.10).
The result of these extreme polar associations tied to both large and small breast size may be seen in women’s desire and preference for medium breast size (i.e., C cup).

In addition to connotations associated with varying breast sizes, some studies have linked breast satisfaction to varying levels of self-esteem. Research from Koff and Benavage (1998) found that women with low self-esteem often had lower breast satisfaction, and that women with a higher degree of self-consciousness or appearance and social anxiety (which can also be classified as a lower degree of self-esteem) have a significantly larger discrepancy between their ideal and perceived breast size. However, Tantleff-Dunn and Thompson (2000) discovered no correlation between perceived and current breast satisfaction in relation to self-esteem, body image anxiety or overall appearance satisfaction.

**The ideal breast and the media.** As previously mentioned, women in the media are equipped with the current idea of the perfect figure—a size two waist with size four hips and size ten breasts. This figure of large breasts on an extremely thin body is the idealized shape seen across the majority of media (Owen & Laurel-Seller, 2000; Cusumano & Thompson, 1997). Additionally, according to Latteier (1998) the media portray not only a body with very specific dimensions but also idealizes a very exact type of breast—a firm, uplifted breast with plenty of cleavage.

Media provide a way of thinking about the ideal body and how to achieve it (Goodman & Walsh-Childers, 2004). Women are not often exposed to a variety of breast sizes and shapes in the mainstream media; rather, they are exposed to the ideal breast (Goodman & Walsh-Childers, 2004) and overall largely singular version of beauty (Dove, 2004). Moreover, the media tend to only display images of an unnatural idealistic breast size (Tantleff-Dunn, 2002), and advertisements contain visuals of one option for how a woman should look (Bordo, 1993).
As a result, the media have created a situation in which women cannot help but compare themselves to the images they are faced with on a daily basis (Goodman & Walsh-Childers, 2004). Women frequently evaluate themselves against magazine and TV models and look to celebrities as guides for what is attractive and are, not surprisingly, disappointed with their own appearance (Sarwer et al., 1998; Underwood, 2000). For example, a study by Heinberg and Thompson (1995) found that women with body image issues most often compared themselves against media celebrities, while Grogan (1999) revealed that women in their 20s most often compared their bodies to fashion models and actresses. Furthermore, a study by Garner (1997) found that when interviewing women with appearance dissatisfaction, 43% of them compared themselves with magazine models. As a result, “The more that celebrity bodies become the site of identification, desire, and imitation, the more ordinary people will turn to surgery, and the more aggressive we will become in our relationships to our own mirror images” (Blum, 2003, p. 229).

As the above studies have demonstrated, women compare themselves to models in the media, and Wood (1994) found that both women and men tend to emulate these visuals. The constant exposure to the mediated ideal results in a higher standard of beauty for women to attain while simultaneously lowering their self-satisfaction (Richens, 1991; Sarwer et al., 1998; Harrison, 2003; Cusumano & Thompson, 1997). Moreover, multiple studies have cited a correlation between exposure to media messages and its impact on women’s body dissatisfaction (Cafri, Yamamiya, Brannick, & Thompson, 2005). Research has also shown that exposure to these ideal images is positively related to women’s approval of breast augmentation and bust enhancing bras (Harrison, 2003).
As a result, women may internalize this ideal and compare themselves to it (Latteier, 1998; Harrison, & Hefner, 2006; Levine, & Harrison, 2004). Markey and Markey (2009) found that women who internalized media messages concerning body issues tended to be more “interested in pursuing cosmetic surgery to change their body” (p. 163). The reason for this may be that the media act as a source of many things for women. The media educate us on conventional male and female roles (Tuchman, 1978; Artz & Murphy, 2000) and provide a foundation of cultural norms and behavior expectations, both of which provide information for women as to what sort of rewards (i.e., love, success, etc.) may be bestowed upon a them for possessing the ideal breast (Brownmiller, 1984; Bordo, 1993; Tseelon, 1995; Freedman, 1984).

**The ideal breast and celebrity.** While some “cross-cultural research suggests that shared ideals of beauty are not dependent on media images” (Etcoff, 1999, p.138), the majority of studies contend that the “the media, and those they celebrate, have always influenced fashion and body shape” (Underwood, 2000, p.36).

Fashion reinforces a cyclic resurgence of designer body parts (Latteier, 1998) that often coincide with the most popular celebrity at that time. Plastic surgeons in California release an annual listing of the facial and bodily features of the most popularly requested celebrity parts because patients continue to mimic the bodies and faces of top actors or celebrities. Another surgeon cites that for the past quarter of a century, plastic surgery patients have turned to the popular actors and actresses of the time to decide what work to have done (O’Mara, 2002).

According to research from Heinberg and Thompson (1995), women ranked their friends as the foremost source for bodily comparison, with media celebrities as second. In addition, a Toronto plastic surgeon claims that younger women, who make up the majority of breast implant
procedures (ASPS, 2008), look to the stars of today for information on what is physically desirable (Underwood, 2000).

**The ideal breast in a mediated society.** As explained by Ectoff (1999), “Today the average woman compares her genetic physical endowments with a few hand-picked models. Despite their surreal beauty, the media insist that their beauty is attainable through hard work and effort and buying the right product” (p. 69). The pressure to conform to these ideals is enforced by “social endorsements of an ideal body shape, such as those found in print and film media formats” (Cusumano & Thompson, 1997, p. 702). “Women and men’s conception of the societal ideal breast size was found to be even larger than women’s ideal indicating a possible role of media-related images in fostering such discrepancies between current, ideal and perception of societal ideal sizes” (Thompson & Tantleff, 1997, p. 705).

Additionally, the more society is exposed to versions of the ideal female, the ideal body shape, and the ideal breast size, the more both men and women approve of cosmetic surgery, including breast augmentation (Brooks, 2004; Harrison, 2003). For example, Harrison (2003) found that exposure to ideal body images on TV was associated with male and female college students’ idea of the ideal breast and resulted in females who perceived themselves to be smaller-busted preferring a larger bust, or females who perceived themselves to be larger-busted preferring a smaller bust.

**The ideal breast and its impact on a woman’s life.** Most women recognize that meeting the current beauty ideal and “being physically attractive is especially important for females, as behavior, evaluation by others and rewards are contingent upon this attribute” (Martin & Kennedy, 1993, p. 516). Compounding this desire for the ideal breast is the fact that in typical women’s publications:
Cosmetic surgery has long been associated with physical health which in turn is linked with wealth, power and confidence. But whereas thirty years ago, the cosmetic surgery patient required an operation to address a debilitating insecurity resulting from a physical “flaw,” today that patient starts out as an empowered woman “doing it for herself” by making herself feel and look even better after surgery than before. (Woodstock, 2001, p. 421)

Woman can take control of their lives and get ahead by improving their physical “deformities” and meeting the current beauty ideal.

The desire to take control and meet the media’s ideal breast may possibly be reflected in the continuous increase in breast augmentation procedures. According to the American Society of Plastic Surgeons, breast augmentation was the number one procedure performed in 2007, a 64% increase from 2000. More than $12.4 billion was spent by Americans on cosmetic procedures in 2007 with Caucasians representing 76% of cosmetic surgery. In 2007, women from 18- to 19- years old underwent 10,505 breast augmentations, and women from 20- to 29-years old underwent 108,116 breast augmentations.

In addition to these statistics, there have been multiple studies linking breast dissatisfaction with desire for cosmetic surgery (Sarwer, et al., 1998). For example, Nordmann (2000) looked at two groups of women with similar breast size and discovered that women seeking breast augmentation surgery had greater body dissatisfaction with regards to their breast only. Additionally, women seeking the surgery were found to have a much larger discrepancy between their actual and ideal breast size, tended to avoid bodily exposure and contact, and believed that both men and women preferred larger breast to smaller ones.

Moreover, the increase in cosmetic surgery procedures mirrors an increase in the popularity of reality TV cosmetic surgery makeover programs. In 2003, Extreme Makeover, an example of reality cosmetic surgery shows, was the second most watched television program for viewers under age 50 (Sarwer & Crerand, 2004). Additionally, a study by Crockett, Pruzinsky
and Persing (2007) found that cosmetic surgery patients who watched at least one or more reality cosmetic surgery television program cited these reality shows and the media as having a greater impact on the decision to pursue cosmetic surgery, thus supporting the media’s breast ideal as influencing breast augmentation.

Obviously, the part of the body that cosmetic patients feel most dissatisfied with is the part on which they decide to operate (Sarwer, et al., 1998), which further demonstrates that the majority of women seeking cosmetic procedures are unhappy with breast size. The bulk of patients choosing breast augmentation are attempting to enhance their self-image (Goodman & Walsh-Childers, 2004) and reduce self-consciousness (Koff & Benavage, 1998), and are more preoccupied with appearance than women who abstain from cosmetic surgery (Sarwer, et al., 1998). Many women resort to surgery because of social pressures to be beautiful and have a perfect body (Latteier, 1998). The need to conform to what society considers beautiful and the desire to please men (Brooks, 2004) also play a role, as well as a desire to mimic higher social classes (Underwood, 2000) and increase overall quality of life (Rankin, Borah, Perry, & Wey, 1998). Women also choose plastic surgery when they want to market themselves in social relationships (Askegaard, Gertsen, & Langer, 2002), enhance their sense of control and domination, or to create economic gain (Morgan, 1991). An aging population, surgery profitability (McLellan, 2006), the preoccupation with looks by younger people (Underwood, 2000), as well as technological advances in the field (Brooks, 2004) and psychological issues (Figueroa, 2003), have also impacted the number of breast augmentations performed each year.

Because of the delicate relationship between many women’s feelings toward their own breast size and their desire to be beautiful as defined by the mediated ideal, breasts become a source of many different emotions for women, ranging from pride to shame and from sexuality
to insecurity (Goodman & Walsh-Childers, 2004). Breast size satisfaction has been related to levels of self-esteem (Koff & Benavage, 1998) and overall body image satisfaction (Tantleff-Dunn & Thompson 2000).

In order to address the issue of lower self-esteem and decreased body satisfaction, the media tell women there are no bounds to pursuing the perfect body (Underwood, 2000). There are many tools women can use to attain the perfect body and become the ideal specimen, including cosmetic surgery. In essence, women are driven to meet the mediated ideal through altering their bodies, which results in their bodies becoming a commodity. The body simply becomes another experiment (Haiken, 1997), another object to be changed.

Hard work and determination, as well as a little nip here and a minor tuck there, may be the keys to being beautiful. Because of advances in technology (Morgan, 1991) and the ability to select parts of the body (Goodman & Walsh-Childers, 2004), it is now unimaginable as to why women with “defects” would not fix their flaws. Rather than bucking the unobtainable ideal beauty standard, more and more women are willingly conforming to social ideals of beauty (Tantleff-Dunn, 2002).

This willingness to conform has said to be the result of many things—the combination of an extremely narcissistic culture (Underwood, 2000), the popularity of the age management movement (McLellan, 2006), and an overwhelming desire to take “control of their lives” and achieve a “normal body” (Goodman & Walsh-Childers, 2004, p. 637), to name a few. Viewed as yet another lifestyle choice, cosmetic surgery (Underwood, 2000) enables women to “protest against the constraints of the given in their embodied lives and seek liberation from those constraints” (Morgan, 1991, p. 38).
However, Fredrickson and Roberts (1997) believe that women often look at themselves from other people’s point of view, which results in their bodies becoming objects subject to the opinions of others. This concern with appearance and the desire to meet current beauty standards has been identified throughout research (Bartky, 1990; Henderson-King & Henderson-King, 2005). Henderson-King and Henderson-King (2005) also “found that the more shame women feel about not having met socially defined standards of beauty the more likely they are to accept cosmetic surgery” (p. 147).

**Men and the ideal breast.** Men are another factor driving women to meet the ideal breast size. Because of societal pressures, women are forced to compete for male attention and approval. This approval results in higher status both socially and professionally, as well as physically (Brownmiller, 1984; Bordo, 1993; Tseelon, 1995; Freedman, 1984). Additionally, women are aware of men’s open criticism and discussion of women’s breasts, making the breast more of a source of stress and concern for women (Brownmiller, 1984). According to focus groups conducted by Goodman and Walsh-Childers (2004), women believe men’s preference for the ideal breast is impacted by the media, and men constantly evaluate women’s breast size because of negative comments males make about women’s breast to female friends. These participants were also aware that the male-targeted media portrayed women with large breasts, and large breasts are an attraction for men. As a result, many participants felt that meeting the ideal breast size was necessary.

A combination of societal influences, including men and the media, has influenced many women to conform to an ideal breast size seen in advertising. As noted in the introduction, few studies have explored the influence of media on women’s breast size (Goodman & Walsh-Childers, 2004). Advertising is said to display “an unrealistic or idealized picture of people and
their lives” (Richens, 1991, p. 71), which can be seen in the disproportionate breast size cited as the current ideal. There are many unintended consequences of exposure to the unrealistic images portrayed in advertising, including feelings of inadequacy, obsession with physical attractiveness and skewed views on what is the normal beauty standard (Martin & Kennedy, 1993; Martin & Gentry, 1997). Studies also have shown that exposure to these ideal images raises the standard for comparison of physical beauty but does not positively affect levels of personal evaluation (Martin & Kennedy, 1993). Additionally, exposure to these perfect images has resulted in a decrease in confidence, tendency to resort to unhealthy eating practices and the use of plastic surgery (Richens, 1991).

**Theoretical Foundations**

Based on the literature, two theories served as background for the present study. The first theory, Self-discrepancy Theory, contributed to the understanding of how women compare themselves to the ideal breast and the potential impact of this comparison. The second theory, the Model of Predictive Measurements of Advertising Effectiveness, expounded the “$A_{ad} \rightarrow A_b \rightarrow PI$” processes.

Self-Discrepancy Theory helped explain breast size dissatisfaction resulting from the difference among women’s perceived breast size, the ideal breast size, and the breast size of models in print advertisements. The differences were evaluated and used to understand how breast size affects the way a consumer views an advertisement or brand and possibly the resulting purchase intention. “According to self-discrepancy theories, body dissatisfaction reflects the extent of discrepancy between self-perceived physical attributes and these internalized standards” (Jacobi & Cash, 1994, p. 379). Self-Discrepancy Theory was used to assess the negative psychological situations that coincide with a discrepancy between an individual’s actual state (or the self-concept, i.e., current breast satisfaction) and an individual’s
ideal state (or what the individual’s believes represents his/her— or a significant other’s— desire for that individual, i.e., desired or ideal breast satisfaction), resulting in various types of discomfort. The outcome is affected by the magnitude of the discrepancy (i.e., how large a difference there is between ideal and actual breast satisfaction) and the accessibility (i.e., can the ideal actually be obtained by the individual) of the individual’s desired outcome. The lack of a positive outcome results in dejection-related emotions, such as disappointment, dissatisfaction, and sadness (Higgins, 1987). The emotions may be then transferred to the product.

The second theory is based on Lavidge and Steiner’s (1961) “Model of Predictive Measurements of Advertising Effectiveness,” which was later refined by Mackinzie, Lutz and Belch (1986). This theory was used to explain how attitude toward ad, attitude toward the brand and purchasing behavior are related. According to Model of Predictive Measurements, consumers do not automatically go from simply being unaware of the existence of a specific product to actively purchasing the product. Instead, consumers go through an incredibly complicated process that begins with a consumer who is ignorant of a product’s existence. At some point, the consumer is made aware of the existence of a particular product through an advertisement. Once becoming aware of a product’s existence by viewing the particular advertisement, the customer begins to learn about the product and what benefits the product offers. After discovering what the product offers, the consumer will begin to develop attitudes toward the product and begin liking or disliking the product, having a favorable or unfavorable attitude toward the product, etc., which is often a result of the consumer’s attitudes and feelings toward the advertisement. If the consumer begins liking the product and has a favorable attitude toward the product and also has a favorable attitude toward the advertisement, the consumer will start to consider the product over its competitors. Once the product is positioned as the most
favorable product in a category because of the combination of the advertising and the product favorability, most consumers connect this liking to a desire to purchase the product. The desire to purchase the product is coupled with the belief that the acquisition of this product would be an asset to the consumer. The last and final step in the model is the purchase of the product by the consumer.

As previously mentioned, this method was later refined by Mackinzie, Lutz and Belch (1986), who postulated and confirmed that attitude toward the ad influenced attitude toward the brand through both direct and indirect means. Moore and Hutchinson (1983 & 1985) found a direct relationship between ad attitude and brand attitude, and Mitchell and Olson (1981) found that ad attitude was a more significant determinant of attitude toward the brand than consumer’s actual beliefs and evaluations of a brand. Additionally, multiple studies have cited attitude toward the ad as a mediating variable in the advertising process during which both attitude toward the brand and purchase intention are developed (Mitchell & Olson, 1981; Shimp, 1981, Holbrook, 1978). Research has also shown that attitude toward the ad acts as a moderator of consumer’s brand preferences and their resulting purchasing behaviors (Batra, 1984; Batra & Ray, 1983; Holbrook, 1978; MacKenzie, Lutz & Belch, 1986; MacKenzie & Lutz, 1983; Mitchell & Olson, 1981; Moore & Hutchinson, 1983; Shimp, 1981; Zinkham, Gelb, & Martin, 1983). Because Burke and Edell (1989) have demonstrated that negative feelings may directly affect the attitude toward the brand, the researcher hoped to determine how negative feelings (i.e., women who are dissatisfied with their breast size) can be relayed into feelings toward both the advertisement and the brand, and how these feelings may alter purchasing behaviors.

**Hypotheses and Rationale**

In an effort to determine how breast size in advertising influences women, this study aimed to answer the following questions:
RQ1: Do women perceive an advertisement differently based on varying breast size of a model in an advertisement?

RQ2: Do women perceive a brand differently based on varying breast size of a model in an advertisement?

RQ3: Do women’s purchasing intentions change based on varying breast size of a model in an advertisement?

RQ4: Do women with lower breast size satisfaction perceive an advertisement differently than women with higher breast size satisfaction?

As noted in the introduction, multiple studies affirm that medium breast size leads to the highest breast size satisfaction (Harrison, 2003; Kleinke & Staneski, 1980), yet many women prefer breasts larger than their current size (e.g., Tantleff-Dunn, 2002). The present average breast size is a B cup, and more than 60% of women are a B cup size or smaller (Breast Options, 2009). The desire for extremely large breast may be the result of the media, which portrays a woman with unnaturally large breasts and a thin body frame as the ideal (Furnham, Adrian, Dias, Melanie, & McClelland, Alastair, 1998). Women have tried a number of approaches to meet the ideal, but because body fat and breast size are positively correlated, women cannot naturally attain large breast size while simultaneous decreasing body frame size (Harrison, 2003). As a result, many women turn to cosmetic surgery to meet today’s ideal standard. The dramatic and steady increase in cosmetic surgery, regardless of the dangers associated with the procedures, signal that women are highly dissatisfied with their current breast size. This negative body image and the viewing of a naturally unobtainable ideal across all media may result in negative feelings and reactions on behalf of female consumers when viewing advertisements containing large breasts. Negative feelings toward the advertisement may negatively impact the consumer’s attitude toward the brand (Moore & Hutchinson, 1983). Additionally, since attitude toward the ad acts as a moderator of consumer’s purchasing behaviors (Batra, 1984; Batra & Ray, 1983; Holbrook, 1978; MacKenzie, Lutz & Belch, 1986; MacKenzie & Lutz, 1983; Mitchell & Olson,
1981; Moore & Hutchinson, 1983; Shimp, 1981; Zinkham, Gelb, & Martin, 1983), a negative feeling toward the advertisement may negatively impact a consumer’s decision to purchase the product featured in the advertisement.

Therefore, it is hypothesized that:

**HYP1a:** Women exposed to advertising with large\(^1\) breast-to-body ratio will have a less favorable attitude toward the advertisement than women exposed to ads with small breast-to-body ratio.

**HYP1b:** Women exposed to advertising with large breast-to-body ratio will have a less favorable attitude toward the brand than women exposed to ads with small breast-to-body ratio.

**HYP1c:** Women exposed to advertising with large breast-to-body ratio will demonstrate a lower intent to purchase a product than women exposed to ads with small breast-to-body ratio.

Additionally, it is hypothesized that:

**HYP2a:** Women dissatisfied with their breast size (i.e., desire larger breast) will have a less favorable attitude toward the advertisement than women satisfied with their breast size.

**HYP2b:** Women dissatisfied with their breast size (i.e., desire larger breast) will have a less favorable attitude toward the brand than women satisfied with their breast size.

**HYP2c:** Women dissatisfied with their breast size (i.e., desire larger breast) will demonstrate a lower intent to purchase a product than women satisfied with their breast size.

Finally, it is hypothesized that:

**HYP3a:** There will be an interaction between model breast size and participant breast size satisfaction in an advertisement.

**HYP3b:** For an advertisement, the small breast-to-body ratio model/satisfied participant will yield more favorable attitude toward the ad than the large breast-to-body ratio model/dissatisfied participant.

**HYP3c:** For an advertisement, the small breast-to-body ratio model/satisfied participant will yield more favorable attitude toward the brand than the large breast-to-body ratio model/dissatisfied participant.

**HYP3d:** For an advertisement, the small breast-to-body ratio model/satisfied participant will yield more favorable purchase intention than the large breast-to-body ratio model/dissatisfied participant.

\(^1\)Large breast size is equivalent to a C cup or larger
CHAPTER 3
METHOD

Research Design

To test the hypotheses, a posttest only, between subject experimental design was implemented. An experiment was the most appropriate testing method because it met the three criteria for causality: the cause took place before the effect, there were no confounding variables ensuring that the independent variable caused the changes in the dependent variable, and there was a statistical correlation between the two variables (Babbie, 2001). Meeting the criteria for causality was important to this study because the research questions and resulting hypotheses needed to show causality between the breast size of a model in an advertisement and breast size satisfaction, and the resulting attitude toward the advertisement, attitude toward the brand and purchase intention. As a result a multivariate analysis of variance, MANOVA, was used to analyze the data.

Operational Definition of Variables

Independent Variables

The study had two independent variables— the breast size of the model in the stimulus advertisement, and the breast size satisfaction of the participants.

The independent variable, breast size, had two levels—small breasted and large breasted—with each breast size being on the same thin body frame. Breast size was operationalized using the Furnham, Dias and McClelland’s (1998) stimulus figure drawings of waist-to-hip ratio and breast size. The stimulus figure drawings were adopted by Furnham, Dias and McClelland (1998) from previous research by Singh (1993 & 1994), and, according to these studies, were found to be relevant and discerning for research concerning body image. Of the eight figures used in their study, the two selected were the S7SB (slender (S), feminine WHR (7) and small
breasted (SB)) and the S7LB (slender (S), feminine WHR (7) and large breasted (LB)). The S7SB stimulus drawing represented a model with a disproportionately small breast size to body frame, while the S7LB represented the disproportionately large breast size to body frame. Both stimulus figures represented the universal feminine ideal of the 0.7 waist-to-hip ratio (Furnham, Dias & McClelland, 1998). To ensure the proper matching of the stimulus drawings to the created stimulus advertisements, two coders were used to evaluate the difference between waist-to-hip ratio and breast size.

Breast size satisfaction was measured during the experiment through the use of two tools during the questionnaire. The use of two measurements helped minimize any threats to the validity of this portion of the experiment, and the additional information gathered from the second tool will allow for confidence in determining the participant’s breast satisfaction. The first measure of breast size satisfaction required participants to state their actual and ideal breast size using standard American bra cup sizes (A-D), as well as their scale within each cup size (small, medium and large). This resulted in a size scale ranging from one to 12, with a small A cup equaling one and a large D cup equaling 12. The satisfaction with breast size was operationalized as the difference between the participants actual breast size and her ideal breast size (ideal breast size-actual breast size = discrepancy score). This information not only provided a differentiation between those satisfied and unsatisfied with breast size but allowed for dividing participants into groups according to who preferred a larger breast size, a smaller breast size or no change at all. The second test exposed participants to Furnham, Dias and McClelland’s (1998) stimulus figure drawings of waist-to-hip ratio and breast size and asked them to identify their ideal and actual body frame by selecting the figure they felt most closely reflected each.
Stimuli Development

Development of the advertising stimuli consisted of multiple stages. First, the magazine from which the stimulus was selected had to be determined. According to Cusumano and Thompson (1997), *Cosmopolitan* is one of the most popular magazines among the target demographic. This fact was confirmed during the pre-questionnaire that asked subjects to list the top three magazines read (See Table 3-2 for magazines most mentioned and rankings).

The October 2009 edition of *Cosmopolitan* was purchased and an advertisement featuring a form of laundry detergent was selected from the publication (See Appendix B). Instead of using an appearance-based product that could possibly cause an emotional response, a more mundane product that is unrelated to the participant’s image (i.e., laundry detergent) was selected. Specifically, the stimulus advertisement used was chosen because it was an advertisement for a low-involvement product in which the model was wearing clothing that allowed for easy and obvious manipulation of her breast size. Ad One (See Appendix C) featured a model with large breast size, while Ad Two (See Appendix B) featured a model with small breast size. Thus, the exact same model was used in each each condition except for breast size thereby avoiding another confounding variable (i.e., level of model’s attractiveness).

The stimulus advertisements were created by a professional graphic designer who was hired to ensure a realistic looking advertisement. The designer was provided the original advertisement selected from the magazine and all relevant information for development of the ad. The original advertisement was a brand of laundry detergent. The graphic designer left all elements of the ad intact except for the brand of laundry detergent and breast size of the model. The use of an actual laundry detergent advertisement increased external validity. The original advertisement had the brand name removed to prevent it from acting as a confounding variable. Instead, a fictitious brand called Natural Laundry Detergent was created and used in the
advertisement. The brand name was created to reflect the feel of the advertisement selected, and the product packaging was designed to reflect the natural theme. The ads were exactly alike—placement, colors, etc.—except for the breast size of the model. The advertising stimuli were then printed on 8.5 x 11-inch paper. These ads were approved by this study’s thesis committee prior to use in the experiment. Print advertisements were the preferred form of media because it was the easiest and most obvious way to judge differences in breast size.

To ensure an authentic look of the advertisements, two independent coders were recruited from the Master of Advertising program. These students rated the advertisements for authentic appearance and appreciable differences in breast size to body frame in comparison to the Furnham, Dias and McClelland’s (1998) stimulus figure drawings. The study used five-point semantic differential scales to rate the advertisements on the following items (See Appendix A): “Ignoring the model’s breast size and considering only the model’s posture, face and hair, how likely are you to believe that the woman featured in the advertisement would be found in a typical women’s magazine (like those seen in Cosmopolitan or Glamour magazines)?” “Ignoring the model’s breast size, how likely are you to believe the advertisement came from a typical women’s magazine (such as Cosmopolitan or Glamour)?” “Ignoring the model’s breast size, do these advertisements look just alike (font, color, layout, etc.)?” and “Ignoring the model’s breast size, do these advertisements look as if they could be advertisements for laundry detergent?” The intercoder reliability indicated a Cronbach’s Alpha of α=1.0, with both coders rating every single question the exact same. The coders found that the stimulus advertisements were extremely likely to have come from a typical women’s magazine, and they both found it extremely likely that the stimulus advertisements looked like an advertisement that would be found in a typical women’s magazine. Additionally, the coders determined that both stimuli ads
looked exactly alike except for the model’s breast size, they found it extremely likely that the advertisements could be for laundry detergent and they indicated that both stimulus ads matched the desired Furnham, Dias and McClelland’s (1998) stimulus figure drawings.

Additionally, the coders were asked to look at the Furnham, Dias and McClelland’s (1998) stimulus figure drawings and indicate which drawing most closely resembled the body frame to breast size in Stimulus Ad A and which drawing most closely resembled the body frame to breast size in Stimulus Ad B.

**Validity**

This study ensured a high level of both internal and external validity. Campbell and Stanley (1963) defined internal validity as the research design’s ability to permit the researcher to decide whether experimental treatments of a particular group actually impact the dependent variable measured in the study. Internal validity was ensured through the careful screening of participants and instrument reliability. The maturation of subjects could have been an issue, so participant fatigue or boredom had to be considered in the study, both of which were prevented through the use of a brief and concise questionnaire. Pretesting of the subjects could also have become an issue because the participants may have been more aware of their breast size and possibly pay more attention to their breast size in relation to others; however, this issue was addressed by allowing at least one week between the pre-questionnaire and the actual experiment.

According to Campbell and Stanley (1963), external validity is the degree to which the results of an experiment can be found repeatedly. For this study, external validity was maintained through the use of a realistic advertisement prototype.
Reliability

Reliability is defined as the consistency of an experiment so that when repeated the same results occur (Carmines & Zeller, 1979). For this study, reliability was maintained through internal consistency, specifically in the development of a reliable survey instrument. The instrument, which was a questionnaire, required participant’s to evaluate variables on multiple scales. The use of multiple scales ensured the items that reflected the same construct yielded similar results. This was determined using Cronbach’s alpha, and the reliability scores are reported in the dependent measures section.

Additionally, a pretest was used to discover visual problems with the stimulus advertisements, wording problems with the questionnaire, as well as any unexpected matters.

Measurement

The dependent variables were measured using a questionnaire (See Appendix F for the complete questionnaire). Specifically, the questionnaire assessed dependent variables including attitude toward the ad, attitude toward the brand, and purchase intention. All variables utilized a multitude of measuring techniques, which included a five-point Likert scale and a seven-point semantic differential scales.

Dependent Measures: Attitude toward the ad was defined as the tendency to respond favorably or unfavorably to an advertising stimulus (Lutz, 1985). For this particular study, it was measured on a seven-point semantic differential scale. Five items were included as potential indicators of attitude toward the ad: favorable-unfavorable, boring-interesting, dislike very much-like very much, not irritating-irritating, holds attention-does not hold attention. These scale items have been used by a number of researchers studying attitude toward the ad, including Lutz and Belch (1983), Mitchell and Olson (1981), Gardner (1985), MacKenzie, Lutz and Belch (1986), and Phelps and Thorson (1991). A check on the reliability of these items from
established reliability scores from previous literature indicated an $\alpha= 0.91$. However, this study’s check on reliability resulted in an $\alpha= 0.746$.

Attitude toward the brand was defined as a consumer’s overall evaluation of a particular brand (Wilkie, 1986). For this study, it was measured on a seven-point semantic differential scale. The following scale items were included as potential indicators of attitude toward the brand: dislike very much-like very much, bad-good, unpleasant-pleasant and worthless-valuable. These scale items have been used by a number of researchers studying attitude toward the brand, including Shimp (1981), Park and Young (1986), Gardner (1985), Gardner, Mitchell and Russo (1985), Muehling (1987), and Phelps and Thorson (1991). A check on the reliability of these items from previous research indicated an $\alpha= 0.82$. However, this study’s check on reliability resulted in an $\alpha=0.839$.

Purchase intention was defined by Fishbein and Ajzen (1975, p. 369) as "the best single predictor of an individual's behavior will be a measure of his intention to perform that behavior." For this particular study, it was measured on a seven-point semantic differential scale that measured the likelihood that participants would purchase the featured product. As previously mentioned, a fake brand of laundry detergent was created for use in the stimuli advertisements. The following scale items were included as potential indicators of purchase intention: unlikely-likely, uncertain-certain, improbable-probable and definitely-not definitely (Li, Daugherty & Biocca, 2002). However, because this study’s check on reliability resulted in an $\alpha= 0.678$, additional statistics were run on the individual scale items to determine the cause of the low reliability score. The corrected item-to-total correlation for the scales indicated an abnormally low number for the uncertain-certain scale (see Table 3-3). After deleting the uncertain-certain scale, the reliability check for purchase intention yielded an $\alpha= 0.907$. 
Pretest of Experiment

Prior to the full experiment, 25 women, similar in demographics to those from the main experiment sample, participated in a pretest. The purpose of the pretest was to discover visual problems with the stimulus advertisements, wording problems with the questionnaire, as well as any unexpected matters (See Appendix E).

The use of previously tested scales that have been found to be both reliable and valid allowed the researcher to accurately predict if the impact of the experimental treatment (which, for this study, is varying breast sizes in an advertisement) of a particular group actually impacted the dependent variables in this group (attitude toward the ad, attitude toward the brand and purchase intention).

The reliability checks for the scales showed a high internal consistency for the scales, including attitude toward the ad, attitude toward the brand and purchase intention. This study’s check on the reliability of attitude toward the ad resulted in an $\alpha= 0.664$, while attitude toward the brand resulted in an $\alpha= 0.892$. The testing of the reliability of purchase intention resulted in an $\alpha= 0.907$.

Main Test of Experiment

Participants

According to Gravetter and Forzano (2009), each condition required at least 30 participants, resulting in a total of 60 participants needed for this study’s experiment. The present study, however, had a total of 89 participants distributed between both conditions.

Participants were recruited among female undergraduate students from a large southeastern university. All of them were 18 to 23-year old women; the average age was 20. One was a freshman (1%), 31 were sophomores (35%), 34 were juniors (38%) and 23 were seniors (26%).
They voluntarily participated in the study and received extra credit from their instructors for participation.

There are multiple reasons for this demographic being a desirable group to participate in the study. First, young people are preoccupied with body image and display a strong interest in the media (Underwood, 2000). Moreover, according to the American Society of Plastic Surgeons, 10.7 million cosmetic procedures were performed in 2007, with breast augmentation as the number one cosmetic procedure with a total of 347,500 patients undergoing this surgery during that year. Additionally, women from 18- to 19- years old underwent 10,505 breast augmentations, and women from 20- to 29-years old underwent 108,116 breast augmentations, resulting in this study’s target demographic comprising more than 34% of the total breast augmentation procedures in 2007.

**Procedure**

For recruiting purposes, professors teaching undergraduate advertising classes were contacted. After receiving permission from the professors, a pre-questionnaire was distributed via email to the students. Potential subjects were told that the topic was “Women and the Media” to decrease the formation of preconceived notions and prevent the participants from talking about the research. The pre-questionnaire served multiple purposes. First, it eliminated ineligible participants, which was determined by questions such as sex (males were eliminated because this study only focuses on how women are impacted by breast size in advertising), current school level (in an effort to eliminate any students who were not undergraduates), citizen of the U.S. for more than 10 years (in an effort to eliminate any cultural differences and maintain study integrity), and whether the student had undergone breast augmentation (in an effort to eliminate women who may be overly sensitive to the breast size of the stimulus model). Of the 456 students who participated in the prequestionnaire, a total of 204 students were eliminated based
on these criteria, which left 250 students qualified to participate in the study. There was a 64% dropout rate among participants who qualified for the study, with only 89 of the 250 qualified students participating in the experiment. The prequestionnaire also provided a tool for collecting demographic information (ethnicity and age), as well as provided a means to gauge women’s breast satisfaction prior to participation in the experiment so that it could be compared to breast satisfaction following the completion of the experiment. Finally, the participants were asked to list the top three most frequently read magazines to compare findings with Cusumano and Thompson’s (1997) assertions that *Cosmopolitan* is one of the most popular magazines among the target demographic.

Following the identification of students who were eligible and willing to participate, student’s were asked to sign up for a specific time to take part in the experiment (See Appendix D). The experiments were conducted during 12 30-minute sessions held from October 13 to October 19, 2009, on campus in a conference room. The conference room had multiple tables arranged in a large circle. Once participants entered the room, they were asked if the purpose of their visit was to take part in the study about ‘Women and the Media.’ After confirming the participant’s were at the location to participate in the study, each woman provided the moderator her name and was randomly assigned to one of two experimental conditions. Random assignment was conducted using a random numbers table to prearrange the experimental packets, which contained an instruction/informed consent sheet, the stimulus advertisement and the questionnaire, as well as a yellow sheet of paper placed between the instruction sheet and stimulus ad in an effort to prevent the participants from viewing the ad longer than necessary. The researcher drew from the top of the prearranged packets to assign each participant to an experimental condition. After the subjects received their packets, they were seated around the
table and separated as much as the room set-up allowed as to prevent one participant from seeing another’s answers and to avoid experimental contamination. The participants were told to not open their packets until given further instructions. Once all participants arrived for the 30 minute session, the moderator provided instructions to the group. Each participant was told to open the packet but to place the papers on the table, leaving them in order, and not go through them. Once all participants had done this, the moderator instructed the participants to read and sign the informed consent (See Appendix F), and once this was done, to turn over the informed consent so that the yellow page was on top of the stack. Once all participants had signed the informed consent, the moderator asked the participants to turn over the yellow page and look at the advertisement for a few seconds. The participants were exposed to the stimulus advertisement for 30 seconds, which was timed by the moderator. Next, the subjects were asked to complete the questionnaire (See Appendix G). They were all told to ask the moderator if any questions arose and that they could leave once the questionnaire was complete. Each subject was again asked to enter the last four digits of her phone number and initials in order to match both the pre-questionnaire and main experiment questionnaire. Participants responded to questions regarding attitude toward the ad, attitude toward the brand and purchase intention, followed by questions regarding breast size satisfaction and manipulation check measures. One of the participants was eliminated because she did not complete all aspects of the survey.

**Manipulation Check Measures**

In an effort to ensure that participants actually read and carefully considered the questions, it was announced that administration time for the questionnaire packet would take a minimum of 30 minutes. Additionally, two items were randomly added, which required the subjects to write a certain number in the answer space or circle a particular answer to a question. No datasets had
to be discarded based on this criterion because subjects answered both manipulation checks correctly.

Analysis

The present study employed The Statistical Package for the Social Sciences (SPSS 17 for Windows) for statistical data analysis. Given the presence of multiple dependent variables and independent variables, MANOVA was conducted. It was run with two independent variables (small breasted/large breasted stimulus advertisement, breast size satisfaction) and three dependent variables (attitude toward the ad, attitude toward the advertised brand, and intent to purchase).
Table 3-1. Frequently Read Magazines.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Magazine Name</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cosmopolitan</td>
<td>106</td>
<td>42.4%</td>
</tr>
<tr>
<td>2</td>
<td>People</td>
<td>19</td>
<td>7.6%</td>
</tr>
<tr>
<td>3</td>
<td>Glamour</td>
<td>14</td>
<td>5.6%</td>
</tr>
<tr>
<td>4</td>
<td>InStyle</td>
<td>11</td>
<td>4.4%</td>
</tr>
<tr>
<td>5</td>
<td>Elle</td>
<td>10</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

Table 3-2. Corrected Item-to-Total Correlation for Uncertain-Certain Scale.

<table>
<thead>
<tr>
<th>Individual Scale Items</th>
<th>Corrected item-to-total correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>unlikely/likely</td>
<td>0.712</td>
</tr>
<tr>
<td>improbable/probable</td>
<td>0.754</td>
</tr>
<tr>
<td>uncertain/certain</td>
<td>-0.023</td>
</tr>
<tr>
<td>definitely not/definitely</td>
<td>0.652</td>
</tr>
</tbody>
</table>
CHAPTER 4
RESULTS

Experiment

This chapter presents the results of the experimental investigation that determined whether the level of a model’s breast size in fashion magazines or breast size satisfaction affected the readers’ attitude toward the ad, attitude toward the brand and purchase intention. The independent variables were the model’s breast size, which was either excessively large or small, and the participant’s breast size satisfaction, participants who were satisfied versus participants who wanted larger breasts. The dependent variables were attitude toward the ad, attitude toward the brand and purchase intention.

Two magazine prototypes were used as stimuli in the experiment: an advertisement featuring a model with large breast size and an advertisement featuring a model with small breast size. Subjects were randomly assigned to view one of the two prototypes and then answered a questionnaire that measured the dependent variables.

A multivariate analysis of variance (MANOVA) was conducted to investigate hypotheses and research questions. The result of the experiment is presented in the following order of describing sample profiles, manipulation checks and reliability checks.

Profile of the Sample

All participants used for this experimental study were American college students. Among a total of 89 participants, 89 (100%) were females. All of them were 18 to 23-year old women; the average age was 20. All of them were undergraduate students (100%). In terms of academic classification, one was a freshman (1%), 31 were sophomores (35%), 34 were juniors (38%) and 23 were seniors (26%). In terms of ethnicity, 66 were Caucasians (74%), four were African Americans (4.5%), 12 were Hispanic (14%), four were Asian (4.5%), one was Pacific Islander
(1%) and two people listed Other (2%). Of the majors listed, 52 were Journalism and Communications majors, 26 were Business majors, six were Liberal Arts and Sciences majors, one was Health and Human Performance major, one was Agricultural and Life Sciences major and one student was Undecided.

**Manipulation Checks**

As a manipulation check, two questions were added toward the end of the questionnaire. One question asked the participants to spell the number eight, while the other question asked the participants to identify a geometric shape. The entire sample of participants (100%) correctly identified the triangle. In addition, all participants correctly spelled the number eight.

**Hypotheses Testing**

The objective of this study was to examine the impact of breast size in print advertisements and a participant’s breast size satisfaction on attitude toward the ad, attitude toward the brand and purchase intention. MANOVA was conducted to examine the effects of a small- or large-breasted model in a print advertisement on attitude toward the ad, attitude toward the brand and purchase intention. The analysis was run with three dependent variables (attitude toward the ad, attitude toward the brand, purchase intention) and two independent variables (stimulus advertisement featuring a small- or large-breasted model, breast satisfaction).

**Effect of Stimulus Ad on Dependent Variables**

Table 4-1 lists the descriptive statistics for the dependent variable attitude toward the ad by each experimental condition of the stimulus ad (large breast-to-body ratio and small breast-to-body ratio). The attitude toward the ad scales had a possible range of 5 to 35, with the higher numbers indicating a more positive attitude toward the advertisement. The overall attitude toward the ad of the respondents ranged from 13 to 35 and had a mean of 24.83 (SD= 5.16, SE= 0.55). The large breast group’s attitude toward the ad ranged from 13 to 34, with a mean of 24.34
The small breast group’s attitude toward the ad ranged from 16 to 35, with a mean of 25.31 (SD= 4.68, SE= 0.70). Based on the means, the small breast group had the highest attitude toward the ad mean, but it was only slightly higher than the mean for the overall results and the mean for the large breast group.

Table 4-2 lists the descriptive statistics for the dependent variable attitude toward the brand by each experimental condition of the stimulus ad (large breast-to-body ratio and small breast-to-body ratio). The attitude toward the brand scales had a possible range of 5 to 35, with the higher numbers indicating a more positive attitude toward the brand. The overall attitude toward the brand of the respondents ranged from 6 to 27 and had a mean of 18.50 (SD= 3.38, SE= 0.36). The large breast group’s attitude toward the brand ranged from 6 to 25, with a mean of 18.34 (SD= 3.72, SE= 0.56). The small breast group’s attitude toward the brand ranged from 10 to 27, with a mean of 18.64 (SD= 3.38, SE= 0.36). Based on the means, the small breast group had the highest attitude toward the brand mean, but it was only slightly higher than the mean for the overall results and the mean for the large breast group.

Table 4-3 lists the descriptive statistics for the dependent variable purchase intention by each experimental condition of the stimulus ad (large breast-to-body ratio and small breast-to-body ratio). The purchase intention scales had a possible range of 5 to 35, with the higher numbers indicating a more positive intent to purchase the product. The overall purchase intention of the respondents ranged from 3 to 20 and had a mean of 11.17 (SD= 4.40, SE= 0.47). The large breast group’s purchase intention ranged from 3 to 18, with a mean of 11.07 (SD= 4.09, SE= 0.62). The small breast group’s purchase intention ranged from 3 to 20, with a mean of 11.27 (SD= 4.73, SE= 0.71). Based on the means, the small breast group had the highest purchase
intention mean, but it was only slightly higher than the mean for the overall results and the mean for the large breast group.

**HYP1**: The first hypothesis tested the main effect of exposure to advertising with large breast-to-body ratio on attitude toward the ad, attitude toward the brand and purchase intention. The main effect of model breast size in a print advertisement on the three combined dependent variables indicated no statistical significance \( F(3, 85) = 0.266, p = 0.850 \), and thus was not supported. According to Table 4-4 and Table 4-5, the parameter estimates for the dependent variables were not significant (attitude toward the ad: \( B = 0.97, t = 0.89, ns \); attitude toward the brand: \( B = 0.30, t = 0.42, ns \); purchase intention: \( B = 0.20, t = 0.21, ns \)).

Hypothesis 1A stated that participants exposed to advertising with large breast-to-body ratio will have a less favorable attitude toward the advertisement than women exposed to ads with small breast-to-body ratio. The results indicated the main effect of large breast-to-body ratio on attitude toward the advertisement \( F(1, 87) = 0.783, p = 0.379 \), such that participants who viewed the ad with a small breast-to-body ratio \([M = 25.31, SD = 4.68]\) showed no more favorable of an attitude toward the ad than did participants who viewed the ad with a large breast-to-body ratio \([M = 24.34, SD = 5.63]\). Thus, hypothesis 1A was not supported; i.e., women who were exposed to the advertisement featuring a model with small breast-to-body ratio showed no more favorable attitude toward the ad than women exposed to the advertisement featuring a model with large breast-to-body ratio.

Hypothesis 1B stated that participants exposed to advertising with large breast-to-body ratio will have a less favorable attitude toward the brand than women exposed to ads with small breast-to-body ratio. The results indicated the main effect of large breast-to-body ratio on attitude toward the brand \( F(1, 87) = 0.178, p = 0.675 \), such that participants who viewed the ad with
small breast-to-body ratio \( [M = 18.64, \text{SD} = 3.05] \) showed no more favorable of an attitude toward the brand than did participants who viewed the ad with a large breast-to-body ratio \( [M = 18.34, \text{SD} = 3.72] \). Thus, hypothesis 1B was not supported; i.e., women who were exposed to the advertisement featuring a model with small breast-to-body ratio showed no more favorable attitude toward the brand than women exposed to the advertisement featuring a model with large breast-to-body ratio.

Hypothesis 1C stated that participants exposed to advertising with large breast-to-body ratio will have lower purchase intention than women exposed to ads with small breast-to-body ratio. The results indicated the main effect of large breast-to-body ratio on purchase intention \( [F (1, 87) = 0.045, p = 0.833] \), such that participants who viewed the ad with small breast-to-body ratio \( [M = 11.27, \text{SD} = 4.73] \) showed no more intent to purchase than did participants who viewed the ad with large breast-to-body ratio \( [M = 11.07, \text{SD} = 4.09] \). Thus, hypothesis 1C was not supported; i.e., women who were exposed to the advertisement featuring a model with small breast-to-body ratio showed no more intent to purchase the product than women exposed to the advertisement featuring a model with large breast-to-body ratio.

**Effect of Breast Size Satisfaction on Dependent Variables**

Table 4-6 lists the descriptive statistics for the dependent variable attitude toward the ad by each experimental condition for breast size satisfaction (satisfied and unsatisfied). The attitude toward the ad scales had a possible range of 5 to 35, with the higher numbers indicating a more positive attitude toward the advertisement. The overall attitude toward the ad of the respondents ranged from 13 to 35 and had a mean of 24.83 (SD= 5.16, SE= 0.55). The satisfied group’s attitude toward the ad ranged from 19 to 33 and had a mean of 28.38 (SD= 4.50, SE= 1.59). The dissatisfied group’s attitude toward the ad ranged from 13 to 35 and had a mean of 24.48 (SD= 5.12, SE= 0.57). Based on the means, the satisfied group had the highest attitude
toward the ad mean, but it was only slightly higher than the mean for both the overall results and the dissatisfied group.

Table 4-7 lists the descriptive statistics for the dependent variable attitude toward the brand by each experimental condition for breast size satisfaction (satisfied and dissatisfied). The attitude toward the brand scales had a possible range of 5 to 35, with the higher numbers indicating a more positive attitude toward the brand. The overall attitude toward the brand of the respondents ranged from 6 to 27 and had a mean of 18.49 (SD= 3.38, SE= 0.36). The satisfied group’s attitude toward the brand ranged from 16 to 22 and had a mean of 19.00 (SD= 2.14, SE= 0.76). The dissatisfied group’s attitude toward the brand ranged from 6 to 27 and had a mean of 18.44 (SD= 3.49, SE= 0.39). Based on the means, the satisfied group had the highest attitude toward the brand mean, but it was only slightly higher than the mean for both the overall results and the dissatisfied group.

Table 4-8 lists the descriptive statistics for the dependent variable purchase intention by each experimental condition for breast size satisfaction (satisfied and dissatisfied). The purchase intention scales had a possible range of 5 to 35, with the higher numbers indicating a more likely intent to purchase the product. The overall purchase intention of the respondents ranged from 3 to 20 and had a mean of 11.17 (SD= 4.40, SE= 0.47). The satisfied group’s purchase intention ranged from 3 to 16 and had a mean of 10.88 (SD= 4.73, SE= 1.67). The dissatisfied group’s purchase intention ranged from 3 to 20 and had a mean of 11.20 (SD= 4.40, SE= 0.49). Based on the means, the satisfied group had the highest purchase intention mean, which was only slightly higher than the mean for the overall results and the dissatisfied group.

**HYP2:** The second hypothesis tested the main effect of participant breast size satisfaction (i.e., desire larger breast) on attitude toward the ad, attitude toward the brand and purchase
intention. The main effect of participant breast size satisfaction on the dependent variables indicated no statistical significance \( F(3, 85) = 1.77, p = 0.159 \), and thus was not supported. According to Table 4-9 -Table 4-10, the parameter estimates for the dependent variables were not significant (attitude toward the ad: \( B= 3.89, t=2.07, ns \); attitude toward the brand: \( B= 0.56, t=0.44, ns \); purchase intention: \( B= -3.23, t= -0.20, ns \)).

Hypothesis 2A stated that participants who were dissatisfied with their breast size (i.e., desire larger breast) will have a less favorable attitude toward the advertisement than women satisfied with their breast size. The results indicated the main effect of breast size satisfaction on attitude toward the advertisement \( F(1, 88) = 4.29, p = 0.041 \), such that participants who were satisfied with their breast size \([M= 28.38, SD= 4.50]\) showed no more favorable attitude toward the ad than women who were dissatisfied with their breast size \([M= 24.48, SD= 5.12]\). Thus, hypothesis 2A was not supported; i.e., women who were dissatisfied with their breast size did not have a less favorable attitude toward the advertisement than those who were satisfied with their breast size.

Hypothesis 2B stated that participants who were dissatisfied with their breast size (i.e., desire larger breast) will have a less favorable attitude toward the brand than women satisfied with their breast size. The results indicated the main effect of breast size satisfaction on attitude toward the brand \( F(1, 88) = 0.20, p = 0.660 \), such that participants who were satisfied with their breast size \([M= 19.00, SD= 2.14]\) showed no more favorable attitude toward the brand than women who were dissatisfied with their breast size \([M= 18.44, SD= 3.49]\). Thus, hypothesis 2B was not supported; i.e., women who were dissatisfied with their breast size did not have a less favorable attitude toward the brand than those who were satisfied with their breast size.
Hypothesis 2C stated that participants who were dissatisfied with their breast size (i.e., desire larger breast) will have a lower intent to purchase than women satisfied with their breast size. The results indicated the main effect of breast size satisfaction on purchase intention [F (1, 88) = 0.04, p = 0.845], such that participants who were satisfied with their breast size [M= 10.88, SD= 4.73] showed no more intent to purchase than women who were dissatisfied with their breast size [M= 11.20, SD= 4.40]. Thus, hypothesis 2C was not supported; i.e., women who were dissatisfied with their breast size showed no less intent to purchase the product than women who were satisfied with their breast size.

**Interaction Effect of Model Breast Size and Participant Breast Size Satisfaction**

**HYP3:** The third hypothesis tested the interaction effect of model breast size and participant breast size satisfaction on attitude toward the ad, attitude toward the brand and purchase intention. Hypothesis 3A, 3B, 3C and 3D explored whether there were any interaction effects between model breast size and participant breast size satisfaction. Hypothesis 3A stated that there will be an interaction between model breast size and participant breast size satisfaction in an advertisement. Hypothesis 3B stated that the small breast-to-body ratio model/satisfied participant will yield more favorable attitude toward the ad than the large breast-to-body ratio model/dissatisfied participant. Hypothesis 3C stated that the small breast-to-body ratio model/satisfied participant will yield more favorable attitude toward the brand than the large breast-to-body ratio model/dissatisfied participant. Hypothesis 3D stated that the small breast-to-body ratio model/satisfied participant will yield more favorable purchase intention than the large breast-to-body ratio model/dissatisfied participant.

Independent sample t-tests were conducted to determine if subjects in the two groups categorized by their levels of model breast size (small/large) were significantly different. For each breast discrepancy scale the two-tailed significance was examined. For the first breast
discrepancy scale – the discrepancy between ideal and actual cup sizes A, B, C or D – the two-tailed significance was 0.46, which was not significant. The mean score of women satisfied with current breast size compared to the mean score of women dissatisfied with current breast size did not result in a significant difference (t (87) = 0.743, p = 0.383) (F= 0.78). The mean of participants exposed to the large breast stimulus advertisement (M= 1.57, SD= 0.50) was not significantly different from the mean of participants exposed to the small breast stimulus advertisement (M= 1.49, SD= 0.51).

For the second breast discrepancy scale – the discrepancy between ideal and actual cup sizes small, medium or large – the two-tailed significance was 0.46, which was not significant. The mean score of women satisfied with current breast size compared to the mean score of women dissatisfied with current breast size resulted in a significant difference (t (87) = -0.737, p = 0.823) (F= 0.05). However, the mean of participants exposed to the large breast stimulus advertisement (M= 1.45, SD= 0.50) was not significantly different from the mean of participants exposed to the small breast stimulus advertisement (M= 1.53, SD= 0.50).

For the third breast discrepancy scale – the discrepancy between the ideal and actual stimulus figure drawings – the two-tailed significance was 0.12, which was not significant. The mean score of women satisfied with current breast size compared to the mean score of women dissatisfied with current breast size resulted in a significant difference (t (87) = -1.592, p = 0.555) (F= 0.35). However, the mean of participants exposed to the large breast stimulus advertisement (M= 1.43, SD= 0.50) was not significantly different from the mean of participants exposed to the small breast stimulus advertisement (M= 1.60, SD= 0.50).
Table 4-1. Descriptive Statistics for Attitude Toward the Ad (LB vs. SB).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>M (mean)</th>
<th>SD (standard deviation)</th>
<th>SEM (standard error of mean)</th>
<th>MD (median)</th>
<th>R (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Breast</td>
<td>44</td>
<td>13.00</td>
<td>34.00</td>
<td>24.34</td>
<td>5.63</td>
<td>0.85</td>
<td>26.00</td>
<td>21.00</td>
</tr>
<tr>
<td>Small Breast</td>
<td>45</td>
<td>16.00</td>
<td>35.00</td>
<td>25.31</td>
<td>4.68</td>
<td>0.70</td>
<td>26.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Overall Results for Attitude toward the Ad</td>
<td>89</td>
<td>13.00</td>
<td>35.00</td>
<td>24.83</td>
<td>5.16</td>
<td>0.55</td>
<td>26.00</td>
<td>22.00</td>
</tr>
</tbody>
</table>

Table 4-2. Descriptive Statistics for Attitude Toward the Brand (LB vs. SB).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>M (mean)</th>
<th>SD (standard deviation)</th>
<th>SEM (standard error of mean)</th>
<th>MD (median)</th>
<th>R (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Breast</td>
<td>44</td>
<td>6.00</td>
<td>25.00</td>
<td>18.34</td>
<td>3.72</td>
<td>0.56</td>
<td>18.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Small Breast</td>
<td>45</td>
<td>10.00</td>
<td>27.00</td>
<td>18.64</td>
<td>3.05</td>
<td>0.46</td>
<td>18.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Overall Results for Attitude toward the Brand</td>
<td>89</td>
<td>6.00</td>
<td>27.00</td>
<td>18.50</td>
<td>3.38</td>
<td>0.36</td>
<td>18.00</td>
<td>21.00</td>
</tr>
</tbody>
</table>

Table 4-3. Descriptive Statistics for Purchase Intention (LB vs. SB).

<table>
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<tr>
<th>Group</th>
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<th>Min.</th>
<th>Max.</th>
<th>M (mean)</th>
<th>SD (standard deviation)</th>
<th>SEM (standard error of mean)</th>
<th>MD (median)</th>
<th>R (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Breast</td>
<td>44</td>
<td>3.00</td>
<td>18.00</td>
<td>11.07</td>
<td>4.09</td>
<td>0.62</td>
<td>11.50</td>
<td>15.00</td>
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<tr>
<td>Small Breast</td>
<td>45</td>
<td>3.00</td>
<td>20.00</td>
<td>11.27</td>
<td>4.73</td>
<td>0.71</td>
<td>12.00</td>
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<tr>
<td>Overall Results for Purchase Intention</td>
<td>89</td>
<td>3.00</td>
<td>20.00</td>
<td>11.17</td>
<td>4.40</td>
<td>0.47</td>
<td>12.00</td>
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<td>Source</td>
<td>Dependent Variable</td>
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<td>F</td>
<td>Sig.</td>
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<td>----</td>
<td>-------------</td>
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<td>------</td>
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<td></td>
</tr>
<tr>
<td>Corrected Model</td>
<td>AAD</td>
<td>20.941&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
<td>20.941</td>
<td>.783</td>
<td>.379</td>
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<td></td>
<td>ABR</td>
<td>2.050&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>2.050</td>
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<td>.045</td>
<td>.833</td>
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<td>2051.853</td>
<td>.000</td>
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<td>ABR</td>
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<td></td>
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<td>StimAdv</td>
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<td>ABR</td>
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<td>2.050</td>
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<td>.675</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>PI</td>
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<td>1</td>
<td>.876</td>
<td>.045</td>
<td>.833</td>
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<tr>
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<td>26.730</td>
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<td>PI</td>
<td>1705.595</td>
<td>87</td>
<td>19.605</td>
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<tr>
<td>Total</td>
<td>AAD</td>
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<td>89</td>
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</tr>
</tbody>
</table>

a. R Squared = .009 (Adjusted R Squared = -.002)
b. R Squared = .002 (Adjusted R Squared = -.009)
c. R Squared = .001 (Adjusted R Squared = -.011)
Table 4-5. Parameter Estimates for HYP 1.

<table>
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<tr>
<th>Dependent Variable</th>
<th>Parameter</th>
<th>B</th>
<th>Std. Error</th>
<th>T</th>
<th>Sig.</th>
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</thead>
<tbody>
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<td>.779</td>
<td>31.229</td>
<td>.000</td>
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<td></td>
<td>Small breast</td>
<td>.970</td>
<td>1.096</td>
<td>.885</td>
<td>.379</td>
</tr>
<tr>
<td></td>
<td>Large breast</td>
<td>0(^a)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>18.341</td>
<td>.512</td>
<td>35.809</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Small breast</td>
<td>.304</td>
<td>.720</td>
<td>.421</td>
<td>.675</td>
</tr>
<tr>
<td></td>
<td>Large breast</td>
<td>0(^a)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
<td>11.068</td>
<td>.668</td>
<td>16.582</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Small breast</td>
<td>.198</td>
<td>.939</td>
<td>.211</td>
<td>.833</td>
</tr>
<tr>
<td></td>
<td>Large breast</td>
<td>0(^a)</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

\(^a\) This parameter is set to zero because it is redundant.

Table 4-6. Descriptive Statistics for Attitude Toward the Ad (Breast Satisfaction).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>(M) (mean)</th>
<th>SD (standard deviation)</th>
<th>SEM (standard error of mean)</th>
<th>MD (median)</th>
<th>R (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>8</td>
<td>19.00</td>
<td>33.00</td>
<td>28.38</td>
<td>4.50</td>
<td>1.59</td>
<td>30.00</td>
<td>14.00</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>81</td>
<td>13.00</td>
<td>35.00</td>
<td>24.48</td>
<td>5.12</td>
<td>0.57</td>
<td>26.00</td>
<td>22.00</td>
</tr>
<tr>
<td>Overall Results for</td>
<td>89</td>
<td>13.00</td>
<td>35.00</td>
<td>24.83</td>
<td>5.16</td>
<td>0.55</td>
<td>26.00</td>
<td>22.00</td>
</tr>
<tr>
<td>Attitude Toward the Ad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-7. Descriptive Statistics for Attitude Toward the Brand (Breast Satisfaction).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>(M) (mean)</th>
<th>SD (standard deviation)</th>
<th>SEM (standard error of mean)</th>
<th>MD (median)</th>
<th>R (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>8</td>
<td>16.00</td>
<td>22.00</td>
<td>19.00</td>
<td>2.14</td>
<td>0.76</td>
<td>19.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>81</td>
<td>6.00</td>
<td>27.00</td>
<td>18.44</td>
<td>3.49</td>
<td>0.39</td>
<td>18.00</td>
<td>21.00</td>
</tr>
<tr>
<td>Overall Results for</td>
<td>89</td>
<td>6.00</td>
<td>27.00</td>
<td>18.49</td>
<td>3.38</td>
<td>0.36</td>
<td>18.00</td>
<td>21.00</td>
</tr>
<tr>
<td>Attitude Toward the Brand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4-8. Descriptive Statistics for Purchase Intention (Breast Size Satisfaction).

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>M (mean)</th>
<th>SD (standard deviation)</th>
<th>SEM (standard error of mean)</th>
<th>MD (median)</th>
<th>R (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>8</td>
<td>3</td>
<td>16</td>
<td>10.88</td>
<td>4.73</td>
<td>1.67</td>
<td>13.0</td>
<td>13</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>81</td>
<td>3</td>
<td>20</td>
<td>11.20</td>
<td>4.40</td>
<td>0.49</td>
<td>12.0</td>
<td>17</td>
</tr>
<tr>
<td>Overall Results for</td>
<td>89</td>
<td>3</td>
<td>20</td>
<td>11.17</td>
<td>4.40</td>
<td>0.47</td>
<td>12.0</td>
<td>17</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-9. Test of Between-Subject Effects for HYP 2.

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>AAD</td>
<td>110.375</td>
<td>1</td>
<td>110.375</td>
<td>4.294</td>
<td>.041</td>
</tr>
<tr>
<td></td>
<td>ABR</td>
<td>2.247</td>
<td>1</td>
<td>2.247</td>
<td>.195</td>
<td>.660</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>.757</td>
<td>1</td>
<td>.757</td>
<td>.039</td>
<td>.845</td>
</tr>
<tr>
<td>Intercept</td>
<td>AAD</td>
<td>20341.431</td>
<td>1</td>
<td>20341.431</td>
<td>791.426</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>ABR</td>
<td>10208.449</td>
<td>1</td>
<td>10208.449</td>
<td>884.597</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>3547.229</td>
<td>1</td>
<td>3547.229</td>
<td>180.926</td>
<td>.000</td>
</tr>
<tr>
<td>OVBS</td>
<td>AAD</td>
<td>110.375</td>
<td>1</td>
<td>110.375</td>
<td>4.294</td>
<td>.041</td>
</tr>
<tr>
<td></td>
<td>ABR</td>
<td>2.247</td>
<td>1</td>
<td>2.247</td>
<td>.195</td>
<td>.660</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>.757</td>
<td>1</td>
<td>.757</td>
<td>.039</td>
<td>.845</td>
</tr>
<tr>
<td>Error</td>
<td>AAD</td>
<td>2236.097</td>
<td>87</td>
<td>25.702</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ABR</td>
<td>1004.000</td>
<td>87</td>
<td>11.540</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>1705.715</td>
<td>87</td>
<td>19.606</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>AAD</td>
<td>57224.000</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ABR</td>
<td>31448.000</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>12808.000</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>AAD</td>
<td>2346.472</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ABR</td>
<td>1006.247</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>1706.472</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .047 (Adjusted R Squared = .036)
b. R Squared = .002 (Adjusted R Squared = -.009)
c. R Squared = .000 (Adjusted R Squared = -.011)
Table 4-10. Parameter Estimates for HYP 2

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Parameter</th>
<th>B</th>
<th>Std. Error</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAD</td>
<td>Intercept</td>
<td>24.481</td>
<td>.563</td>
<td>43.460</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>3.894</td>
<td>1.879</td>
<td>2.072</td>
<td>.041</td>
</tr>
<tr>
<td></td>
<td>Dissatisfied</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABR</td>
<td>Intercept</td>
<td>18.444</td>
<td>.377</td>
<td>48.865</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>.556</td>
<td>1.259</td>
<td>.441</td>
<td>.660</td>
</tr>
<tr>
<td></td>
<td>Dissatisfied</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>Intercept</td>
<td>11.198</td>
<td>.492</td>
<td>22.760</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>-.323</td>
<td>1.641</td>
<td>-.197</td>
<td>.845</td>
</tr>
<tr>
<td></td>
<td>Dissatisfied</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. This parameter is set to zero because it is redundant.

Table 4-11. Group Statistics for HYP 3.

<table>
<thead>
<tr>
<th>Large or Small Breast Stimulus Advertisement</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>is woman satisfied with current breast size or not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>44</td>
<td>1.5682</td>
<td>.50106</td>
<td>.07554</td>
</tr>
<tr>
<td>Small</td>
<td>45</td>
<td>1.4889</td>
<td>.50553</td>
<td>.07536</td>
</tr>
<tr>
<td>cup size satisfaction or not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>44</td>
<td>1.4545</td>
<td>.50369</td>
<td>.07593</td>
</tr>
<tr>
<td>Small</td>
<td>45</td>
<td>1.5333</td>
<td>.50452</td>
<td>.07521</td>
</tr>
<tr>
<td>stimulus figures- satisfied or not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>44</td>
<td>1.4318</td>
<td>.50106</td>
<td>.07554</td>
</tr>
<tr>
<td>Small</td>
<td>45</td>
<td>1.6000</td>
<td>.49543</td>
<td>.07385</td>
</tr>
<tr>
<td></td>
<td>Levene's Test for Equality of Variances</td>
<td>t-test for Equality of Means</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------</td>
<td>-----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
<td>df</td>
</tr>
<tr>
<td>is woman satisfied</td>
<td>.769</td>
<td>.383</td>
<td>.743</td>
<td>87</td>
</tr>
<tr>
<td>with current breast</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>size or not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cup size satisfaction or not</td>
<td>.050</td>
<td>.823</td>
<td>-.737</td>
<td>87</td>
</tr>
<tr>
<td>equal variances assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stimulus figures-</td>
<td>.350</td>
<td>.555</td>
<td>-1.592</td>
<td>87</td>
</tr>
<tr>
<td>satisfied or not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equal variances assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 5
DISCUSSION AND CONCLUSIONS

The current study was intended to determine if a causal relationship exists between the size of a model’s breast and how women perceive advertisements and brands, as well as their resulting purchasing behaviors, in addition to determining if a participant’s breast size satisfaction influences the aforementioned advertising effects. To date, there is no body of academic research available that discusses the impact of varying breast size in advertising or how breast size satisfaction influences attitudes and behaviors; therefore, this study also aimed to provide insight to marketers and advertisers about how to portray women in print advertisements. Because of the use of large breasts on thin bodies (Owen & Laurel-Seller, 2000; Cusumano & Thompson, 1997), the level of breast dissatisfaction in women (Thompson, Heinberg, Altabe & Tantleff-Dunn, 2001; Sarwer, Wadden, Pertschuk, & Whitaker, 1998), and the increase in breast augmentation procedures (ASPS, 2008), it was important to delve into this area of research. However, the study found that all three proposed hypotheses were not supported. Unlike the original expectations, exposure to a stimulus ad featuring a large-breasted model versus a stimulus ad featuring a small-breasted model resulted in no significant impact on any of the dependent variables, nor did the breast size satisfaction of the participants. Additionally, there were no interaction effects between the model’s breast size and the participant’s breast size satisfaction.

Theoretical Implications

The results were both surprising and interesting, as they did not perform as originally expected. This study demonstrated that a young woman’s image of her breast size does not impact how she views an ad, nor does the breast size of a print model influence the effect of the advertising. While women may be continuously bombarded by media, including advertisements,
featuring a naturally unobtainable beauty standard of a thin woman with large breasts (Sullivan, 2001; Owen & Laurel-Seller, 2000; Mazur, 1986; Cusumano & Thompson, 1997), this study found that they seem to not be impacted by the images presented in these advertisements. While there may be a few possible reasons for the unexpected results, cultivation theory can provide an adequate explanation for the outcome (Gerbner, Gross, Morgan, & Signorielli, 1986). In a natural environment women are normally exposed to a media message multiple times; however, this study utilized a single 30-second exposure in an artificial environment to determine the impact of breast size in advertising. Cultivation theory states that a woman’s satisfaction with breast size may only be made through multiple exposures over an extended period of time, so the outcome of this study may have varied if participants had been exposed to the stimulus ads multiple times over an extended period of time and then measured for their attitudes. This is compounded by the fact that participants in this study were tested immediately following exposure, so the women may not yet have displayed signs of being impacted by the advertising; however, if they had been measured an hour or two after exposure, different results may have occurred. Furthermore, the combination of cultivation theory and various life experiences may have an impact. While a woman may not be impacted by viewing a print advertisement and then proceeding with tasks that do not relate to body image (i.e., working, class), if a woman is exposed to such an advertisement several times and is then put in a situation where body image is prevalent (i.e., pool party), the effects of the advertisement may be exacerbated (the pool party could trigger the negative feelings associated with the advertisement).

In conjunction with cultivation theory, the theory of repetition in advertising may also present an explanation for the results. This theory states that the effectiveness of an advertising message is in the shape of an inverted U, and that a consumer is most impacted by an
advertisement when it is at a level of low to moderate exposures. However, once a consumer is
overwhelmed with a particular type of message, the communication will cease to be effective
(Berlyne, 1970; Cacioppo & Petty, 1979). An advertisement being viewed enough times to
where it is no longer effective is thought to be the result of multiple things, including tedium,
and, according to repetition theory, tedium can be caused by boredom and satiation (Berlyne,
1970). Women have been inundated with images of large breasts on thin bodies (Owen &
Laurel-Seller, 2000; Cusumano & Thompson, 1997), and repetition theory suggests that because
of the numerous exposures throughout a woman’s lifetime (satiation), she may no longer be
susceptible to the media’s message. This could possibly result in women not paying attention to
the breast size of a model in any advertisement because they’ve seen breasts splashed all over the
media (boredom), to the point that they pay no attention to it.

Additionally, previous research has found women are largely dissatisfied with their
current breast size (Thompson, Heinberg, Altabe & Tantleff-Dunn, 2001; Sarwer, Bartlett,
Bucky, LaRossa, Low, Pertschuk, Wadden & Whitaker, 1998), and the results from this study
coincided with earlier studies with 91% of this study’s respondents demonstrating dissatisfaction
with their current breast size. However, the present study found that breast size satisfaction did
not predict a participant’s response, whether positive or negative, to an advertisement featuring a
model with large breasts or an advertisement featuring a model with small breasts. Furthermore,
breast size satisfaction did not impact the participant’s attitude toward the ad, attitude toward the
brand or purchase intention. A possible explanation for these findings is that women already
have a means to alter breast size despite their dissatisfaction including breast augmentation,
padded bras, or dietary supplements. For example, breast augmentation was the leading
procedure with 347,500 performed in 2007 alone (ASPS, 2008), which may reinforce the idea
that women are taking action to correct their dissatisfaction with their breast size. The Wonderbra, which is a cleavage-enhancing padded bra, was introduced in 1994 and was instantly successful, with one bra sold every 15 seconds (Moberg, Sisken, Stern & Wu, 1999) and is the third most popular brand of bra in the United States (The NPD Group Women’s Special Sizes Report- Bras and Panties, 2008). Similarly, sales of breast-enhancement pills, or dietary supplements, are growing at a double-digit percentage rate each year, with annual sales estimated between $200 million and $2 billion (Schoettle, 2003).

While previous research has shown that desire for bigger breasts and overall breast satisfaction may be the result of many factors, past studies demonstrate that the media are likely a contributor to breast size dissatisfaction (Richens, 1991; Sarwer et al., 1998; Harrison, 2003; Cusumano & Thompson, 1997; Underwood, 2000; Garner, 1997). Women compare themselves to the media, and the media often act as a major influence in breast size satisfaction (Latteier, 1998). However, this study’s results have shown that while the media may impact women’s breast size satisfaction, advertisements featuring models with a large breast-to-body ratio and advertisements with a small breast-to-body ratio do not differ in how they impact the way women feel about an ad or brand, nor does it impact their intention to purchase an item. Additionally, a woman’s breast size satisfaction, whether a woman is satisfied or dissatisfied with her breast size, does not impact attitude toward the ad, brand or purchase behavior.

The question then becomes what potentially caused these results. One possible explanation is that women are desensitized to female breast size in advertising. Because the ideal breast is strewn across all forms of media, including advertising, women may no longer be impacted by it. Much of the previous work cited in this study was from 10 to 20 years ago, and it is possible that today’s woman is not as easily impacted by breast size in advertising. Today’s
woman may simply not pay attention to breast size because she sees breasts strewn across multiple forms of media and is simply immune to them, and, because of the large number of advertisements seen daily, she may not be as easily influenced by any advertising. It is also possible that advertising does not impact women the way it once did, and that an ad may have a brief, momentary impact instead of a considerable, long-lasting impact as cited in previous literature. Additionally, the majority of previous research was attempting to demonstrate a correlation between the media and body image, while this study was hoping to show causation between breast size and consumer behavior.

Another possible explanation is the product category featured in the advertisement. The fact that the stimulus ad was for laundry detergent, which would be considered a low-involvement product, could have resulted in participants thinking less about the model and, overall, having less interest in the ad (Petty, Cacioppo & Schumann, 1983). This is in comparison to an appearance-based product that could possibly trigger an emotional response in the participant, thus causing the participant to pay more attention to the advertisement, and possibly the breast size of the model.

Finally, as previously mentioned, cultivation theory may explain the unexpected results. A single 30 second exposure may not be enough time to affect how the participant feels, and, instead, multiple exposures over an extended period of time may cultivate the feelings of dissatisfaction with breast size. For example, research from Myers and Biocca (1992) states that the advertising industry consciously targets women’s body image in an effort to impact their reaction to advertising. Women internalize these images and use them as a guide for determining what they should and should not look like— their ideal breast size— and compare themselves to the images to decide how close or far away they are from meeting the ideal— their actual breast
size (Lautman, 1991). According to previous studies (e.g., Biocca, 1991; Johnson-Laird, 1983), this process of internalizing and adopting a social ideal includes the creation of a mental model and may include visualizing oneself in the socially represented ideal body. Lautman (1991) says that it is during this time that women may connect with the models in the media messages and fantasize about being these models. This process is actually described as a type of cultivation (Gerbner, Gross, Morgan & Signorielli, 1980; Signorielli & Morgan, 1990). However, Myers and Biocca (1992) claim that, at this point, women are not completely impacted by this ideal version of the female. It is at a later point in time when women are faced with the reality that they do not meet this ideal (whether this is true or something they simply perceive) that the contrast between a women’s actual and ideal body may lead to negative views of their present body. As a result, the negative views may impact their attitude toward the ad, brand and purchase intention. Since the participants in this study were tested immediately after exposure, the women may not yet display signs of being impacted by the advertising, but if they were measured an hour or two following exposure the results may be different. The outcome may also vary if the participants had been exposed to the stimulus ads multiple times and then measured for their attitudes.

**Managerial Implications**

The results of this study offer marketers and advertising agencies practical insights into the use of models of varying breast size in advertisements, as well as a better understanding of how women’s breast size satisfaction impacts their attitudes and behaviors. The study’s findings are significant in that they suggest that women are not particularly impacted by the breast size of models in print advertisements for a low-involvement product following a single exposure. The experiment showed that the size of a print model’s breast size does not necessarily play an important role in determining a consumer’s attitude toward an ad or a product, or impact the
participant’s purchasing behaviors. Additionally, the findings propose that breast size satisfaction does not always alter a woman’s attitude toward an advertisement, brand or purchase intention.

Therefore, advertising and marketing communication practitioners and researchers may not need to seriously consider the size of the female model’s breast or the breast satisfaction of female consumers when creating advertisements for low-involvement products. Furthermore, practitioners now have a study documenting the impact of breast size in advertising and can refute arguments claiming a direct route between advertisements and body image dissatisfaction.

**Conclusion**

The goal of this study was to determine if breast size in advertising impacts attitude toward advertisements and brands, changes the purchase behavior of consumers or impacts a consumer’s breast size satisfaction. A secondary, and equally important goal, was to contribute to the limited research focusing on this area. This is one of the first studies to explore the impact of model breast size and consumer breast size satisfaction on advertising effectiveness. The results from this study found that the size of a model’s breast in a print advertisement did not impact how a consumer views an ad or brand, nor did it affect purchasing behavior or the participant’s breast size satisfaction. Hopefully, this study will initiate research about how marketers and advertisers portray breast size in advertisements, and how women with varying breast size satisfaction negotiate advertisements featuring women of varying breast size.

**Limitations and Future Research**

More needs to be known about how media content influences the perception of the ideal breast and how women navigate exposure to this image. The limitations of this study suggest a number of issues for future research. The first limitation involves the study participants, who were restricted to female college students. Although this sample was appropriate for a study on body image, the results may differ for other subjects. For example, it may be interesting to see
how males react to models of varying breast size. In addition, students from the Southern region of the U.S. may be different from students in other geographic locations. Thus, future research should investigate a wider demographic base to generalize the results across segments. Additionally, future research should employ more sophisticated sampling methods to recruit a sample whose demographics, psychology and lifestyles are more diverse.

Another limitation of the study is associated with the artificial environment of the experiment. The classroom atmosphere coupled with viewers’ exposure time to the stimulus advertisement could have led respondents to pay closer attention to the ads than they would have in a natural setting. Thus, future research may consider exposing participants to the stimulus ad in a more natural environment, such as their home, and then testing the participants at a later date. Additionally, this study took a cross-sectional approach to determining the impact of both breast size in advertising and participant breast size satisfaction on multiple advertising effects, without taking into consideration developmental influences (Smolak, Levine, & Striegel-Moore, 1996). Future research should possible take a more developmental perspective through the use of longitudinal methodology to detect whether the participant’s reaction may possibly dissipate, continue as is or worsen over time (Field, Camargo, Taylor, Berkey, & Colditz, 1999).

Finally, the method of measuring dependent variables in the study could be improved. Because all the dependent variables in this study were measured right after exposure to the stimulus ad, important long-term effects went unanalyzed. Additionally, multiple exposures to the advertisements have not been analyzed. Therefore, future research should consider evaluating the long-term effects of the stimulus ad, as well as multiple exposures to the stimulus advertisement.
Melanie York  
Master of Advertising Candidate  
Stimulus Ad Test

My name is Melanie York, and I am a Master of Advertising candidate at the University of Florida. I am currently working toward the completion of my degree requirements for graduation through work on a thesis. As part of my research, I am surveying female undergraduate students to collect valuable information for my study on the impact of breast size on how a consumer views an advertisement, brand, purchase intention and breast satisfaction. My academic advisor for this research is Dr. J. Robyn Goodman, who is an associate professor of advertising in the College of Journalism and Communications.

This questionnaire should take approximately 10 minutes to complete. Once you have completed this questionnaire please hand it in to me.

Any information that you provide will be kept confidential. You do not have to answer any questions you do not wish to answer. Your identity will be kept confidential to the extent provided by law such that no personal information will be made public either during or following the completion and release of this study. During the study no one other than Dr. Goodman or me will have access to any answered questionnaires. The questionnaires will be destroyed once the study has been completed.

Questions or concerns about your rights as a research participant may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611; (352) 392-0433.

Thank you,

Melanie York
1. IGNORING the model’s breast size and considering only the model’s posture, face and hair, how likely are you to believe that the woman featured in the advertisement would be found in a typical women’s magazine (like those seen in *Cosmopolitan* or *Glamour* magazines)?

Extremely likely  Somewhat likely  Not at all likely

1  2  3  4  5

2. IGNORING the model’s breast size, how likely are you to believe the advertisement came from a typical women’s magazine (such as *Cosmopolitan* or *Glamour*)?

Extremely likely  Somewhat likely  Not at all likely

1  2  3  4  5

3. IGNORING the model’s breast size, do these advertisements look just alike (font, color, layout, etc.)?

Extremely alike  Somewhat alike  Not alike at all alike

1  2  3  4  5

4. IGNORING the model’s breast size, do these advertisements look as if they could be advertisements for laundry detergent?

Extremely likely  Somewhat likely  Not at all likely

1  2  3  4  5
5. Please review the below drawings and indicate which drawing most closely resembles the body frame to breast size of Stimulus Ad A by marking an ‘X’ in the circle below the figure.

6. Please review the below drawings and indicate which drawing most closely resembles the body frame to breast size of Stimulus Ad B by marking an ‘X’ in the circle below the figure.
staying in
is no reason your alluring side
shouldn’t come out

dress every side a touch more with natural. renewing scent pearls will release
with your embrace, so from alluring to serene, daring and beyond, you can

feel more

www.naturallaundry.com
staying in
is no reason your alluring side
shouldn’t come out

dress every side a touch more with natural, renewing scent pearls will release with your embrace, so from alluring to serene, daring and beyond, you can

feel more

www.naturallaundry.com
Invitation to Participate

I would like to invite you to participate in a study for the purpose of better understanding how the media portrays women.

The study will be administered on the following dates and times in Weimer Hall on the University of Florida campus. The study should take approximately 30 minutes to complete.

Name:
Date:

Will you be able to participate?

yes _____
no _____

Please indicate the date and time you plan to attend.

Tuesday Oct. 13 (Weimer 3032) 9:35 a.m.
Tuesday Oct. 13 (Weimer 3032) 10:00 a.m.
Tuesday Oct. 13 (Weimer 3032) 10:35 a.m.
Tuesday Oct. 13 (Weimer 3032) 11:00 a.m.

Wednesday Oct. 14 (Weimer 3032) 9:35 a.m.
Wednesday Oct. 14 (Weimer 3032) 10:00 a.m.
Wednesday Oct. 14 (Weimer 3032) 10:35 a.m.
Wednesday Oct. 14 (Weimer 3032) 11:00 a.m.

Monday Oct. 19 (Weimer 3032) 2:00 p.m.
Monday Oct. 19 (Weimer 3032) 2:30 p.m.
Monday Oct. 19 (Weimer 3032) 3:00 p.m.
Monday Oct. 19 (Weimer 3032) 3:30 p.m.

If for any reason you are unavailable your scheduled time, please call me at (xxx) xxx-xxxx.
APPENDIX E
PRE-QUESTIONNAIRE

Melanie York
Master of Advertising Candidate
Pre-questionnaire

Women and the Media

My name is Melanie York and I am a Master of Advertising candidate at the University of Florida. I am currently working toward the completion of my degree requirements for graduation through work on a thesis. As part of my research, I am surveying undergraduate students to collect valuable information for my study on women and the media. My academic advisor for this research is Dr. J. Robyn Goodman, who is an associate professor of advertising in the College of Journalism and Communications.

I would like to invite you to participate in this survey. Your participation will assist me in determining qualified students for my experiment. If you agree to participate in this screening process, please complete the questionnaire below. This questionnaire should take approximately 15 minutes to complete. You do not have to answer any questions you do not wish to answer.

If you agree to participate, I will email your professor with a list of people who completed the questionnaire. This list will not have any information concerning your responses.

Any information that you provide will be confidential to the researchers. Your identity will be kept confidential to the extent provided by law such that no personal information will be made public either during or following the completion and release of this study. During the study no one other than Dr. Goodman or me will have access to any answered questionnaires. The questionnaires will be destroyed once the study has been completed.

Questions or concerns about your rights as a research participant may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611; (352) 392-0433.

Thank you,

Melanie York
1. Please provide your first and last name.________________________

2. Please provide the name of your professor that provided this extra credit opportunity.________________________

   (**The above questions are only asked so that you can be compensated through extra credit for your participation in the survey.)

3. Please provide the last four digits of your phone number and your initials:

4. Please list the top three magazines you most frequently read (in order).

5. Please provide your age:

6. Please provide your gender:

7. Please provide your ethnicity:

8. Please provide your Major:

9. Please provide your current school status: (freshman, sophomore, junior, senior)

10. How long have you lived in the United States?

11. Have you ever undergone any sort of cosmetic surgery? If so, please provide type and year of surgery.

   Please circle the number that best represents how you feel about the following questions.

12. How often do you avoid sports or working out because you didn’t want to be seen in gym clothes?

   Very often
   5  4  3  2  1

   Never

13. How concerned are your body is not muscular enough?

   Very concerned
   5  4  3  2  1

   Not concerned at all

14. Do you feel bad about yourself because you don’t like your body?

   Very much
   5  4  3  2  1

   Not at all
If you are a female, please continue with questions 15 through 20. If you are a male, please skip questions 15 through 20, and continue with question 21.

15. Please state your actual breast size using standard American bra cup sizes of either A, B, C or D.
   a. __
   b. __
   c. __
   d. __

16. Within your cup size, please state whether you consider your actual breast size to be a small, medium or large version of the cup size? (For example, are you a small A?)
   a. Small
   b. Medium
   c. Large

17. Please state your ideal breast size using standard American bra cup sizes of either A, B, C or D.
   a. __
   b. __
   c. __
   d. __

18. Within this ideal cup size, please state whether you consider your ideal breast size to be a small, medium or large version of the cup size? (For example, are you a small A?)
   a. Small
   b. Medium
   c. Large

19. Please review the drawings below and indicate which drawing most closely resembles your actual body frame to breast size by marking an ‘X’ in the circle below the figure.
20. Please review the below drawings and indicate which drawing most closely resembles your ideal body frame to breast size by marking an ‘X’ in the circle below the figure.

If you are a male, please continue with questions 21 through 23. If you are a female, you are finished with the survey.

21. Please review the below drawings and indicate which drawing most closely resembles your actual figure by marking an ‘X’ in the circle below the figure.
22. Please review the below drawings and indicate which drawing most closely resembles your ideal figure by marking an ‘X’ in the circle below the figure.
23. Please review the below drawings and indicate which drawing most closely resembles your actual body frame to breast size by marking an ‘X’ in the circle below the figure.
Informed Consent

Protocol Title: Women and the media

Please read this consent document carefully before you decide to participate in this study.

Purpose of the research study:

My name is Melanie York and I am a Master of Advertising candidate at the University of Florida. I am currently working toward the completion of my degree requirements for graduation through work on a thesis. As part of my research, I am surveying undergraduate students to collect valuable information for my study on women and the media. The purpose of this study is to examine the effects of the media on how women feel about themselves.

What you will be asked to do in the study:

You will be asked to look at print advertisements for a brand of laundry detergent. After looking at the ad, you will be asked a series of questions including information about your attitude toward the advertisement, brand and purchasing intentions.

Time required:

30 minutes

Risks and Benefits:

There are no direct benefits or risks to you for participating in the study.

Compensation:

You will receive extra class credit as compensation for participating in this research.

Confidentiality:

Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number. The list connecting your name to this number will be kept in a locked file in my faculty supervisor's office. When the study is completed and the data have been analyzed, the list will be destroyed. Your name will not be used in any report.
Voluntary participation:

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

Right to withdraw from the study:

You have the right to withdraw from the study at anytime without consequence.

Whom to contact if you have questions about the study:

Melanie York, Master of Advertising Candidate, Department of Journalism and Communications, Weimer Hall, Melanie.York@ufl.edu, xxx-xxx-xxxx.

Dr. Robyn Goodman, Associate Professor of Advertising, Department of Journalism and Communications, Weimer Hall, rgoodman@jou.ufl.edu, 352-392-2704.

Whom to contact about your rights as a research participant in the study:

IRB02 Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; phone 392-0433.

Agreement:

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Participant printed name: ____________________________________________
Participant signature: _______________________________________________
Date: ______________

Principal investigator signature: ______________________________________
Date: ______________

Department of Journalism and Communications
Weimer Hall
PO Box 118400
University of Florida
Gainesville, FL 32611
Melanie York  
Master of Advertising Candidate  
Questionnaire

Women and the Media

My name is Melanie York, and I am a Master of Advertising candidate at the University of Florida. I am currently working toward the completion of my degree requirements for graduation through work on a thesis. As part of my research, I am surveying female undergraduate students to collect valuable information for my study on women and the media. My academic advisor for this research is Dr. J. Robyn Goodman, who is an associate professor of advertising in the College of Journalism and Communications.

This questionnaire should take approximately 30 minutes to complete. Once you have completed this questionnaire please hand it in to me.

Any information that you provide will be kept confidential. You do not have to answer any questions you do not wish to answer. Your identity will be kept confidential to the extent provided by law such that no personal information will be made public either during or following the completion and release of this study. During the study no one other than Dr. Goodman or me will have access to any answered questionnaires. The questionnaires will be destroyed once the study has been completed.

Questions or concerns about your rights as a research participant may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611; (352) 392-0433.

Thank you,

Melanie York
1. Please provide the last four digits of your phone number and your initials: __________

2. Please reference the advertisement for laundry detergent and circle one response for each of the following statements.

<table>
<thead>
<tr>
<th>I find the ad to be favorable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>I find the ad to be unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find the ad to be boring</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I find the ad to be interesting</td>
</tr>
<tr>
<td>I dislike the ad very much</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I like the ad very much</td>
</tr>
<tr>
<td>I do not find the ad irritating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I find the ad irritating</td>
</tr>
<tr>
<td>The ad holds my attention</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>The ad does not hold my attention</td>
</tr>
</tbody>
</table>

3. Please reference the advertisement for laundry detergent and circle one response for each of the following statements about your feelings of the brand.

<table>
<thead>
<tr>
<th>I dislike the brand very much</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>I like the brand very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find the brand to be bad</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I find the brand to be good</td>
</tr>
<tr>
<td>I find the brand to be unpleasant</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I find the brand to be pleasant</td>
</tr>
<tr>
<td>I find the brand to be worthless</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I find the brand to be valuable</td>
</tr>
</tbody>
</table>

4. Please reference the advertisement for laundry detergent and circle one response for each of the following statements about your willingness to purchase the product.

<table>
<thead>
<tr>
<th>I am unlikely to purchase the product</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>I am likely to purchase the product</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is improbable that I will purchase the product</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>It is probable that I will purchase the product</td>
</tr>
<tr>
<td>I am uncertain as to whether I</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>I am certain as to whether I</td>
</tr>
</tbody>
</table>
5. Please rate the importance of each of the following groups as to their significance when considering breast size. Circle one response from the following items (1 to 5).

<table>
<thead>
<tr>
<th></th>
<th>Not an important comparison group</th>
<th>A very important comparison group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Closest friends</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Other students</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Average university student</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Celebrities/ famous people</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Average U.S. citizen</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>Media models</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

6. Please state your **actual** breast size using standard American bra cup sizes of either A, B, C or D.
   a. __
   b. __
   c. __
   d. __

7. Within your cup size, please state whether you consider your **actual** breast size to be a small, medium or large version of the cup size? (For example, are you a small A?)
   a. Small
   b. Medium
   c. Large

8. Please state your **ideal** breast size using standard American bra cup sizes of either A, B, C or D.
   a. __
   b. __
   c. __
   d. __

9. Within this ideal cup size, please state whether you consider your **ideal** breast size to be a small, medium or large version of the cup size? (For example, are you a small A?)
   a. Small
   b. Medium
   c. Large

10. Please review the below drawings and indicate which drawing most closely resembles your **actual** body frame to breast size by marking an ‘X’ in the circle below the figure.
11. Please review the below drawings and indicate which drawing most closely resembles your ideal body frame to breast size by marking an ‘X’ in the circle below the figure.
12. Please spell out the number eight. __________

13. Please circle the triangle below.

☐  ●  △

14. Please circle one response from the following items.

<table>
<thead>
<tr>
<th></th>
<th>Definitely disagree</th>
<th>Mostly disagree</th>
<th>Neither agree nor disagree</th>
<th>Mostly agree</th>
<th>Definitely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My body is sexually appealing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I like my looks just the way they are</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Most people would consider me good looking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I like the way I look without my clothes on</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I like the way</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
my clothes fit me

<table>
<thead>
<tr>
<th>I am physically unattractive</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I dislike my physique</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Please review the following questions and circle the statement that best fits.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you been so worried about your shape</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>that you have been feeling that you ought</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to diet?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you thought that your thighs,</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>hips or bottom are too large for the rest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of you?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you been afraid that you might</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>become fat (or fatter)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you worried about your flesh not</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>being firm enough?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you worried about your thighs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>spreading out when sitting down?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have you noticed the shape of other</td>
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<td>women and felt that</td>
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<td>your own shape compared unfavorably?</td>
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LIST OF REFERENCES


Website: http://www.breastoptions.com/augment.html

Website: http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/ImplantsandProsthetics/BreastImplants/ucm064332.htm

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BIOGRAPHICAL SKETCH

Melanie York is from Lexington, S.C. She attended Auburn University in Auburn, Ala., earning a Bachelor of Liberal Arts with a major in journalism and minor in marketing. She came to the University of Florida in August 2008 to pursue a Master of Advertising.