ATTITUDES TOWARD COSMETIC SURGERY IN MIDDLE-AGED WOMEN: BODY IMAGE, AGING ANXIETY, AND THE MEDIA

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Our study investigated factors that influence attitudes toward cosmetic surgery in middle-aged women. A sample of 108 women, aged between 35 and 55 years, completed questionnaire measures of body dissatisfaction, appearance investment, aging anxiety, media exposure (television and magazine), and attitudes toward cosmetic surgery (delineated in terms of general attitudes, social motivations, and actual consideration). Body dissatisfaction, appearance investment, aging anxiety, and both media variables predicted some facet of attitudes toward cosmetic surgery. Specifically, appearance investment, aging anxiety, and television exposure were unique predictors of endorsement of social motivations for cosmetic surgery, whereas body dissatisfaction, appearance investment, and television exposure were unique predictors of actual consideration of cosmetic surgery. Regression analysis revealed that the effects of media on cosmetic surgery attitudes were primarily direct. We concluded that there are multiple influences on attitudes toward cosmetic surgery for women of middle age.

Over the past decade there has been dramatic growth in the popularity of cosmetic surgery (American Society of Plastic Surgeons [ASPS], 1998, 2009). For example, in 2008 just over 12 million cosmetic procedures (of a surgical and nonsurgical nature) were performed in the United States alone (ASPS, 2009). Cosmetic surgery is no longer the preserve of the rich and famous or the psychologically disturbed. Men and women, young and old (Sarwer et al., 2005), and people of varying socio-economic statuses (Didie & Sarwer, 2003) now “go under the knife” in the name of appearance enhancement. However, by far the major consumer group is middle-aged women (40–55 years) (ASPS, 2009), the focus of the present research. It appears that for this group in particular, cosmetic surgery has opened up a new and attractive method of body manipulation, aimed at meeting unrealistic societal standards of beauty (Sarwer & Crerand, 2004). In 2008, the top five procedures sought by middle-aged women were liposuction, blepharoplasty (i.e., eyelid surgery), breast augmentation, rhinoplasty (i.e., nose reshaping), and abdominoplasty (i.e., tummy tuck; ASPS, 2009).

Despite the growing popularity of cosmetic surgery, little is known about the factors that influence attitudes toward these procedures. The only theoretical model we found in the research literature (Sarwer, Wadden, Pertschuk, & Whitaker, 1998) pertains to cosmetic surgery use and describes body image as a major determinant. Two of the basic components of body image are appearance evaluation and appearance investment (Cash, 2006). Appearance evaluation represents the judgemental thoughts or beliefs surrounding the body, most commonly represented in terms of body dissatisfaction. Appearance investment, on the other hand, is defined as the extent to which an individual’s attention, thoughts, and actions focus on their looks and define their sense of self (i.e., the importance of appearance to self-worth; Cash, Melnyk, & Hrabosky, 2004). Sarwer et al. propose that individuals who are both highly dissatisfied with their bodies and highly appearance invested will be more likely to present for cosmetic surgical procedures.

The first component, body dissatisfaction, is unequivocally reported as an impetus for surgical enhancement. Heightened body dissatisfaction is documented among both young (Bolton, Pruzinsky, Cash, & Persing, 2003; Didie & Sarwer, 2003; Sarwer et al., 2003) and middle-aged (Sarwer, Whitaker, Wadden, & Pertschuk, 1997) female pre-operative patients. However, findings regarding the second component are mixed. Some studies have found...
elevated levels of appearance investment among younger (Sarwer et al., 2003) and middle-aged (Sarwer et al., 1997) female pre-operative patients, whereas others have found no significant differences (Bolton et al., 2003; Didie & Sarwer, 2003).

In nonsurgical samples, research concerning attitudes toward cosmetic surgery has involved predominantly female college samples. Among this cohort, greater body dissatisfaction (Henderson-King & Henderson-King, 2005; Sarwer et al., 2005, but not Delinsky, 2005), poorer self-assessed attractiveness (Swami, Chamorro-Premuzic, Bridges, & Furnham, 2009), and appearance investment (Delinsky, 2005; Sarwer et al., 2005) are associated with more favorable views of cosmetic surgery. In a study of cosmetic surgery attitudes across the lifespan (18–65 years), women interested in cosmetic surgery reported poorer self-rated attractiveness, less comfort in a swimsuit, and more frequent mirror checking (Frederick, Lever, & Peplan, 2007). Although interest in cosmetic surgery was similar across age groups, certainty of interest was greater in older women, suggesting that interest may be more likely to translate into use with age.

To date, few studies have focused on cosmetic surgery attitudes in middle-aged women, despite their being the primary consumer group. There is considerable evidence that middle-aged women, like younger women, experience high levels of body dissatisfaction (Tiggemann, 2004). Among this group, high levels of body dissatisfaction are associated with a number of adverse psychosocial consequences, including poor self-esteem (Webster & Tiggemann, 2003), depression (Simon et al., 2008), and disordered eating (Lewis & Cachelin, 2001). A smaller body of research suggests that appearance investment may decrease with age (Pliner, Chaiken, & Flett, 1990; Thompson et al., 1998, but not Webster & Tiggemann, 2003). However, other indicators, such as the multi-billion dollar “anti-aging” cosmetics industry (Huang & Miller, 2007) and the cosmetic surgery phenomenon, provide compelling evidence that aging women continue to place a great deal of importance on appearance.

We propose here an additional factor that may be particularly relevant to middle-aged women (but not younger women), namely, aging anxiety. Aging anxiety is defined as the “combined concern and anticipation of losses centered around the aging process” (Lasher & Faulkender, 1993, p. 247), with perceived changes to physical appearance as one of its four major dimensions. Anxiety regarding loss of attractiveness is common among middle-aged women (Barrett & Robbins, 2008), which is hardly surprising given Western cultural norms that equate women’s aging with a decline in physical attractiveness (Saucier, 2004). Among middle-aged women, fear of aging is associated with a number of weight-related behaviors, including drive for thinness and disordered eating (Gupta & Schork, 1993; Lewis & Cachelin, 2001). Hence, it seems likely that weight and shape-enhancing cosmetic procedures (e.g., liposuction and abdominoplasty) would appeal to middle-age women anxious about the aging process. Furthermore, the relentless pressure placed on aging women to present faces that are taut and wrinkle-free (Saucier, 2004), would heighten their interest in procedures such as facelifts and eyelid surgery.

Individual difference variables like body image and aging anxiety do not develop in isolation, but as a complex function of various influences in a broader sociocultural context (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). One powerful part of that context is provided by the mass media (Tiggemann, 2003). Here, we predict that the media will influence attitudes toward cosmetic surgery in both a direct and indirect fashion. In terms of direct effects, there is little doubt that the media has increased public awareness of cosmetic surgery. Magazine and television advertising and programs increasingly feature the latest advances in cosmetic surgical procedures (Sarwer & Crerand, 2004), as well as prolific discussion of the latest celebrity to “go under the knife.” More recently, cosmetic surgery has also become the focus of a number of popular reality television programs, such as Extreme Makeover (currently on air in Australia) and The Swan (Sarwer & Crerand, 2004), which present personal narratives of average people undergoing extensive cosmetic surgical procedures. Thus it seems likely that regular exposure to cosmetic surgery in the media serves to normalize these procedures, as well as to induce a desire to directly model this behavior. However, we know of only two studies that have investigated the influence of media on cosmetic surgery attitudes, both among female college students (Delinsky, 2005; Sperry, Thompson, Sarwer, & Cash, 2009). It is predicted that greater media exposure will be similarly associated with positive attitudes toward cosmetic surgery among middle-aged women.

An indirect effect of media is proposed to occur via body dissatisfaction, appearance investment, and aging anxiety. General sociocultural models (Levine & Smolak, 1996; Stice, 1994) hold the media responsible for high levels of body dissatisfaction, due to its pervasive transmission of unrealistic standards of female attractiveness. Although this link is well established in younger women (Tiggemann, 2003; Yamamiya, Cash, Melnyk, Posavac, & Posavac, 2005) and adolescents (Hargreaves & Tiggemann, 2002; Levine, Smolak, & Hayden, 1994), we contend that middle-aged women are likely to be similarly affected. Aging female celebrities have established new and unrealistic age-related norms of appearance (Bordo, 2003), which are likely to reap negative psychological consequences for the average middle-aged woman. More specifically, comparison with these age-appropriate, yet thoroughly unrealistic ideals is likely to be significantly upward, promoting body dissatisfaction and aging anxiety. Furthermore, internalization of the media message linking middle-aged beauty with sexual desirability, happiness, wealth, and success may implicitly encourage the equation of appearance with self-worth. In turn, cosmetic surgery may be regarded as an...
Attractive method for alleviating these appearance-focused concerns.

In sum, the present study sought to investigate predictors of attitudes toward cosmetic surgery in middle-aged women, the primary consumer group. It was predicted that both body dissatisfaction and appearance investment would be related to positive cosmetic surgery attitudes. In addition, it was predicted that greater aging anxiety would be associated with more positive views of cosmetic surgery. Finally, the media was anticipated to have both a direct and indirect effect via body dissatisfaction, appearance investment, and aging anxiety.

**METHOD**

**Participants**

The participants were 108 middle-aged women, between 35 and 55 years of age ($M = 43.61$, $SD = 5.31$), with the majority being married (83%). Of the sample, 39% had completed secondary school, 32% had completed a certificate or diploma, and 29% had a university degree. The majority being married (83%). Of the sample, 39% had completed secondary school, 32% had completed a certificate or diploma, and 29% had a university degree. The mean body mass index score (BMI) was 26.80 ($SD = 5.32$), indicating that the women were, on average, at the lower bound of the overweight range (BMI = 25–30), as defined by Garrow and Webster (1985). The women were mothers, or the friends of mothers, of children attending a metropolitan school in Adelaide, South Australia. This particular school was targeted because it is located near the University and has a large student population. The student body is predominantly Caucasian (>90%) and of medium socio-economic status (>85%).

**Materials and Procedure**

The survey was conducted between July and August 2008. Potential participants were mailed the questionnaire, entitled “Female Body Image,” together with a letter of introduction outlining the aims of the study and requirements for participation. In accordance with the ethical guidelines of the approving body, informed consent was satisfied via return of the anonymous questionnaire. The questionnaire consisted of a number of sections, including background information; a purpose-designed measure of media exposure; and established measures of attitudes toward cosmetic surgery, body dissatisfaction, appearance investment, and aging anxiety.

**Background Information.** Participants were asked to report their age, marital status, education level, and current weight and height. The latter two variables were used to calculate BMI, as a ratio of weight (kg) to height (m$^2$). Participants were also asked about prior use and future likelihood of cosmetic surgical and nonsurgical procedures.

**Attitudes Toward Cosmetic Surgery.** The Acceptance of Cosmetic Surgery Scale (Henderson-King & Henderson-King, 2005) was used to assess participants’ attitudes toward cosmetic surgery. The scale assessed both general attitudes and the likelihood of actually undergoing a cosmetic surgical procedure. The 15-item scale consists of three 5-item subscales: Intrapersonal, Social, and Consider. The Intrapersonal subscale is an other-oriented measure, assessing attitudes and beliefs about cosmetic surgery for people in general (e.g., “Cosmetic surgery is a good thing because it can help people feel better about themselves”). In contrast, the Social and Consider subscales are self-oriented measures. The Social subscale assesses personal social motivations for cosmetic surgery (e.g., “If it would benefit my career I would seriously consider having cosmetic surgery”), whereas the Consider subscale assesses the likelihood that the respondent would consider having a cosmetic surgical procedure (e.g., “In the future, I could end up having some kind of cosmetic surgery”). Using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), participants were asked to indicate their level of agreement with the 15 statements. A total score for each of the three subscales was obtained by summing the five relevant items, with possible scores for each ranging from 5 to 35. Henderson-King and Henderson-King (2005) reported high internal consistency for each subscale (all, $\alpha = .85$), in a sample with a mean age of 39 years. Reliability was similar for all subscales in the present study: Intrapersonal ($\alpha = .89$); Social ($\alpha = .91$); and Consider ($\alpha = .91$).

**Body dissatisfaction.** The Body Areas Satisfaction Subscale of the Multidimensional Body-Self Relations Questionnaire (Brown, Cash, & Mikulka, 1990) was used to measure body satisfaction. The 9-item measure represented the full body, including the face and weight. Participants indicated their degree of satisfaction using a 5-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). For ease of interpretation, the variable was relabelled body dissatisfaction and all items were reverse-scored, such that higher scores indicated greater dissatisfaction. Scores were summed to produce a total body dissatisfaction score, with possible scores ranging between 9 and 45. Cash and Henry (1995) reported moderate internal consistency ($\alpha = .82$) for the scale in a sample of women aged between 18 and 70 years. Reliability for the present sample was similar ($\alpha = .81$).

**Appearance investment.** The revised version of the Appearance Schemas Inventory (Cash et al., 2004) was used to assess core beliefs and assumptions regarding the importance, meaning, and influence of appearance in everyday life. The 20-item scale included items such as, “If I look good on a given day, it’s easy to feel happy about other things” and “I try to be as physically attractive as I can.” Participants used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to indicate their level of agreement with the 20 statements. Higher scores represented higher appearance investment. The 20
items were summed to obtain a total appearance investment score, with possible scores ranging from 20 to 100. Cash et al. (2004) reported high internal consistency for the total scale in a sample of undergraduate women \( (\alpha = .88) \). Internal consistency for the present sample was similarly strong \( (\alpha = .90) \).

**Aging anxiety.** The Physical Appearance subscale of the Anxiety About Aging Scale (Lasher & Faulkender, 1993) was used to assess the degree of anxiety about age-related changes to physical appearance. Participants were asked to rate the accuracy of five statements on a 5-point Likert scale ranging from 1 (definitely disagree) to 5 (definitely agree). An exemplar item is “I have never dreaded the day I would look in the mirror and see grey hairs.” Higher scores reflected a higher degree of aging anxiety. Scores were then summed to produce a total aging anxiety score, with possible scores ranging from 5 to 25. Lasher and Faulkender (1993) reported adequate internal consistency \( (\alpha = .71) \) in a sample aged between 18 and 74 years. Internal consistency for the present sample was found to be comparable \( (\alpha = .67) \). However, removing item 5 (the only item not negatively worded) from the scale resulted in a more acceptable level \( (\alpha = .77) \).

**Media exposure (television and magazines).** A measure was developed to assess exposure to appearance-related media. Participants were provided with a list of 16 television shows that were on the air at the time of the study as well as 14 readily available magazines. They were asked to record the frequency with which they viewed/read each television program and magazine. For television, the scale ranged from 1 (never) to 5 (every time it’s on); for magazines, 1 (never) to 5 (every time it comes out). For both television and magazine exposure, scores were summed to produce a total score. Possible total scores for television ranged from 16 to 80; for magazines, 14 to 70. For both mediums, higher scores indicated greater exposure. Reliability for the present sample was adequate for both television \( (\alpha = .80) \) and magazines \( (\alpha = .79) \).

The final list was derived from an initial pool of 20 television programs that were on the air at the time of the study and 27 readily available magazines considered appealing to middle-aged women. Magazines were chosen from the ACP Magazines Ltd. website (http://www.acp.com.au/) and via inspection of the magazine stand at the local newsagency. Television programs were chosen from the local (Sunday Mail) TV Guide, which contains descriptions of free-to-air and Foxtel (a cable television station) programs. Each magazine and television show was rated on a 3-point scale ranging from 0 (no emphasis) to 2 (large emphasis) according to its degree of appearance focus and its representation of beautiful middle-aged women (see Appendix A for mean ratings). Three middle-aged female raters (a nurse, a bank officer, and a hairdresser) were provided with an excerpt (both written and pictorial) of each magazine to ensure their familiarity. For television shows, the raters were directed to the programs’ official websites. Each magazine and television show was then attributed a modal rating for each category. Mean inter-rater reliability averaged across the two categories was high for both magazines \( (r = .85) \) and television \( (r = .91) \). Exemplar magazines include *House and Garden* (0, 0), *Women’s Weekly* (1, 1), and *New Weekly* (2, 2), which focus on home decorating; lifestyle, fashion, and beauty; and celebrity gossip, respectively. Exemplar television shows include *Huey’s Cooking Adventures* (0, 0), *A Current Affair* (1, 0), and *Desperate Housewives* (2, 2). These shows provide cooking demonstrations, recipes, and tips; offer information on local and global current affairs; and portray the lives of a group of attractive middle-age women in a comedy-drama series. A minimum rating of 1 in both categories was required for inclusion in the final list. Five appearance-based lifestyle television programs considered appealing to middle-aged women were also included in the final list of television shows.

**RESULTS**

**Surgery Experiences and Considerations**

Seven women (6%) had previously undergone at least one cosmetic surgical procedure. The procedures were breast enlargement \( (n = 2) \), breast reduction \( (1) \), liposuction \( (1) \), rhinoplasty \( (1) \), ear-pinning \( (1) \), and lap-band surgery \( (2) \) (lap-band surgery is considered a weight reduction surgery as well as a surgical modification of appearance and involves placing a silicone filled band around the upper part of the stomach to reduce its functional capacity). Just over half the women (52%) reported that they would consider cosmetic surgery in the future, with this figure rising substantially (70%) when cost was hypothetically removed from the equation. The most desired surgical procedure was liposuction (33%), followed by abdominoplasty (28%), face-lift (23%), breast enlargement (15%), and rhinoplasty (13%).

For cosmetic (nonsurgical) procedures, only seven women reported prior use, with one undergoing two procedures. The procedures were collagen injections \( (n = 1) \), laser hair removal \( (2) \), facial laser resurfacing \( (2) \), teeth whitening \( (1) \), and sclerotherapy \( (2) \) (vein treatment). Under half of the women (44%) indicated future consideration of cosmetic procedures, with this figure rising to 52% when cost was removed from the equation. Botox® (a protein derived from botulism toxin that is injected underneath the skin in order to minimize or smooth out lines and wrinkles) was the most desired procedure (47%), followed by laser facial resurfacing (18%) and facial tissue fillers (i.e., collagen injections) at 16%.

**Predictors of Cosmetic Surgery Attitudes**

The correlations between predictor variables (body dissatisfaction, appearance investment, aging anxiety, television, and magazine exposure) and the three cosmetic surgery
Table 1
Correlations Among Variables

<table>
<thead>
<tr>
<th>Attitudes Subscales</th>
<th>BD</th>
<th>INV</th>
<th>AA</th>
<th>TV</th>
<th>MAG</th>
<th>INT</th>
<th>SOC</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body dissatisfaction (BD)</td>
<td>−</td>
<td>.12</td>
<td>.15</td>
<td>−</td>
<td>.02</td>
<td>−</td>
<td>.10</td>
<td>.05</td>
</tr>
<tr>
<td>Appearance investment (INV)</td>
<td>−</td>
<td>−</td>
<td>.28**</td>
<td>−</td>
<td>.22*</td>
<td>.20*</td>
<td>.48***</td>
<td>.41***</td>
</tr>
<tr>
<td>Aging anxiety (AA)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>.10</td>
<td>.00</td>
<td>.15</td>
<td>.31***</td>
<td>.25**</td>
</tr>
<tr>
<td>Television exposure (TV)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>.49***</td>
<td>.27***</td>
<td>.35***</td>
<td>.36***</td>
</tr>
<tr>
<td>Magazine exposure (MAG)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>.32***</td>
<td>−</td>
<td>.28**</td>
<td>.20*</td>
<td></td>
</tr>
<tr>
<td>Intrapersonal (INT)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>Social (SOC)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>Consider (CONS)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001.

Table 2
Summary of Regression Coefficients (ß) for Effect of Magazine Exposure on Cosmetic Surgery Attitudes

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Intrapersonal (ß)</th>
<th>Social (ß)</th>
<th>Consider (ß)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazine exposure</td>
<td>.32 .001</td>
<td>.28 .003</td>
<td>.20 .038</td>
</tr>
<tr>
<td>Appearance investment</td>
<td>.29 .003</td>
<td>.18 .036</td>
<td>.11 .212</td>
</tr>
</tbody>
</table>

The Effect of Media

It was predicted that the relationship between media exposure and cosmetic surgery attitudes would be mediated by body dissatisfaction, appearance investment, and aging anxiety. Baron and Kenny (1986) outline three preconditions for testing a mediation effect. First, the independent variable (here television and magazine exposure) must relate to the proposed mediators (body dissatisfaction, appearance investment, and aging anxiety). Second, the mediator must relate to the dependent variable (cosmetic surgery attitudes). The final precondition is that the independent variable must be related to the dependent variable.

As can be seen in Table 1, television exposure was not related to any of the proposed mediators, and hence had only a direct effect on cosmetic surgery attitudes. Magazine exposure related to only one of the proposed mediators, appearance investment, which itself was related to all three cosmetic surgery attitude subscales. Thus only the effect of magazine exposure on cosmetic surgery attitudes can be tested for mediation by appearance investment. All other effects were direct.

In order for mediation to be established, the predictor variable (magazine exposure) must explain substantially less variance in the outcome variable (cosmetic surgery attitudes) after the mediator (appearance investment) is entered into the regression equation (Baron & Kenny, 1986). Accordingly, for each cosmetic surgery attitude, magazine exposure was entered on Step 1 of the regression equation and appearance investment on Step 2. As can be seen in Table 2, which provides the resulting regression coefficients, for the Intrapersonal scale (general attitudes), the beta value for magazine exposure decreased a little (.32 to .29), but clearly retained significance. This reduction was not significant, according to the Sobel (1982) test, z = 1.13, p = .26, indicating that magazine exposure had only a direct effect. For social considerations, the beta for magazine exposure reduced significantly (.28 to .18), z = 2.10, p = .04 but retained significance, providing evidence for partial mediation. That is, magazine exposure had both a direct and indirect (via appearance investment) effect on personal social motivations. Finally, for actual consideration of cosmetic surgery, the beta for magazine exposure reduced (20 to .11) to nonsignificance, z = 2.02, p = .04, indicating that appearance investment mediated the relationship between magazine exposure and consideration of cosmetic surgery.

Unique Predictors of Cosmetic Surgery Attitudes

A final simultaneous regression was performed to investigate the relative importance of all predictor variables, in addition to the demographic variables of age and BMI. A simultaneous regression involves placing all predictors together in the same regression equation, with the size and significance of the resultant Beta values indicating the strength and unique effect of each predictor.
As can be seen in Table 3, all regression equations were significant: intrapersonal, $R^2 = .16, F(7, 92) = 2.55, p = .019$; social, $R^2 = .35, F(7, 92) = 7.16, p < .001$; consider, $R^2 = .31, F(7, 92) = 5.97, p < .001$. There were no unique individual predictors of general attitudes toward cosmetic surgery (intrapersonal subscale). For personal social motivations, appearance investment, aging anxiety, and television exposure all offered a unique contribution. For actual consideration of cosmetic surgery, body dissatisfaction, appearance investment, and television exposure all explained unique variance. Age, BMI, and magazine exposure failed to explain unique variance in any of the subscale measures.

### DISCUSSION

The major contribution of the present research was its investigation of attitudes toward cosmetic surgery in middle-aged women, the primary consumer group. A number of factors were identified. In particular, all of body dissatisfaction, appearance investment, aging anxiety, and media exposure (both television and magazine) predicted some facet of attitudes toward cosmetic surgery, which were delineated in terms of general attitudes, social motivations, and actual consideration.

Perhaps unsurprisingly, body dissatisfaction did not inform general views of cosmetic surgery (the intrapersonal scale), because it is quite possible that an individual who is satisfied with her appearance may still regard cosmetic surgery as beneficial for others who are not. In contrast, body dissatisfaction was a significant and positive predictor of actual consideration of cosmetic surgery. This finding supports previous research conducted in young and middle-aged surgical populations (Bolton et al., 2003; Didie & Sarwer, 2003; Sarwer et al., 1997, 2003), in which body dissatisfaction was reported as a major impetus for surgical enhancement. Of note, the present study used a measure that assessed dissatisfaction with a range of body parts, in contrast to the more global whole-body measures used in other studies of attitudes toward cosmetic surgery (Delinsky, 2005; Frederick et al., 2007; Henderson-King & Henderson-King, 2005; Swami et al., 2009). It has been found that pre-operative samples most often report feature-specific, rather than global body dissatisfaction (Didie & Sarwer, 2003; Sarwer et al., 1997, 2003). Interestingly, self-reported BMI, a possibly more reliable measure of weight and shape, failed to uniquely predict any of the cosmetic surgery attitude measures, highlighting the importance of the subjective experience of appearance.

Appearance investment was positively related to all three cosmetic surgery attitude subscales. Taken together with previous research findings (Delinsky, 2005; Frederick et al., 2007; Sarwer et al., 2005), it appears that women of all ages are more amenable to surgical enhancement for themselves and others when appearance is central to self-worth. Furthermore, underscoring the relevance of this body image component, appearance investment offers a unique contribution to consideration of cosmetic surgery, as well as represents the strongest unique predictor of social motivations. It is of little surprise that those women who invest highly in appearance strongly endorse social reasons for surgical enhancement. In Western societies, women are socialised to place a large emphasis on appearance (Saucier, 2004) and are highly cognisant of the fact that their physical exterior influences how others evaluate them, as well as their social interactions (Sarwer & Creerand, 2004). In terms of actual consideration of cosmetic surgery, the unique predictive status of appearance investment suggests that some middle-aged women may use cosmetic surgery to stave off body discontent, in a bid to maintain self-esteem. It is likely that this practice will become more common in the future, as cosmetic surgery is further normalised.

As proposed, the results indicate that aging anxiety is indeed a relevant factor when examining cosmetic surgery attitudes in middle-aged women. Aging anxiety was a positive and unique predictor of social motivations for cosmetic surgery, suggesting that the many social benefits of a youthful appearance, such as greater employment (Saucier, 2004) and romantic prospects (Didie & Sarwer, 2003), may motivate use of these procedures by women during mid-life. Furthermore, aging anxiety was correlated (although not uniquely) with future consideration, indicating that it may in fact translate to cosmetic surgery use, via body dissatisfaction and appearance investment, providing an avenue for future research. The identification of aging anxiety as a significant predictor also highlights the inherent difficulties in attempting to generalise research findings in this area from those with younger women. Whereas the “anti-aging” properties of cosmetic surgery appear to be a major drawing card for women of middle age, this factor is likely to be of little relevance to younger women.

Media exposure was hypothesised to exert both a direct and indirect effect on attitudes toward cosmetic surgery. Television and magazine exposure were positively related to all three cosmetic surgery attitude subscales, with television exposure affording a unique contribution to both social
motivations and future consideration. Contrary to prediction, the effect of media was predominantly direct. This was particularly the case for television, which had only a direct effect. These findings demonstrate the pervasive and important influence of socio-cultural factors beyond individual difference variables. Normalization is one process that may account for the media's effect. According to cultivation theory (Gerbner, Gross, Morgan, & Signorielli, 1994), heavy media (particularly television) exposure to certain events, values, and people gradually shapes the individual's perception of social reality, often without awareness. Hence, continued exposure to cosmetic surgery in the media may over time modify attitudes, such that it becomes viewed as an acceptable method for addressing body discontent.

Alternatively, the prevalent and positive media representation of cosmetic surgery may induce a desire to directly model this behavior. This may be particularly the case for cosmetic surgery reality programs. When comparing a number of television genres, Sperry et al. (2009) found that reality cosmetic surgery viewership was the strongest unique predictor of cosmetic surgery attitudes, pressure to undergo cosmetic surgery, and prior cosmetic surgery. The persuasive effect and appeal of such shows appears two pronged. First, they promote a sense of deficiency by portraying deviance from beauty ideals as unacceptable and in need of amelioration. Second, they draw an explicit and powerful link between transformation of the physical and a makeover of all areas of life (Banet-Weiser & Portwood-Stacer, 2006). The impact of this particular television genre is only likely to increase. For example, a new reality show, 10 Years Younger in 10 Days, has recently appeared on Australian television. The benefits of cosmetic surgery are also more subtly portrayed in both the real and professional lives of middle-aged female celebrities. In addition to the glamorous characters they portray, the privileged lives of this select group foster the belief that self-worth can only be attained through thinness and youthful beauty.

Interestingly, while the effect of television exposure was purely direct, this was not the case for magazine exposure, indicating that the two mediums may have different underlying mechanisms. A direct effect of magazine exposure was observed for general attitudes toward cosmetic surgery. However, its effect on personal social motivations was both direct and indirect, being partially mediated by appearance investment. Appearance investment also mediated the effect of magazine exposure on actual consideration. Thus, magazine reading appears to elevate the importance of appearance to self-worth in middle-aged women, which in turn makes them more open to the possibility of undergoing cosmetic surgery.

The results of the present study should be interpreted in the context of a number of limitations, including the rather homogenous nature of the sample. Most of the women in our study were Caucasian, married, and mothers. Cross-cultural variation in female beauty ideals (Grabe & Hyde, 2006; O’Dea, 2008) may provoke varying interest in cosmetic surgery, as well as in specific cosmetic surgical procedures. For example, the desire for weight- and shape-based cosmetic procedures may be minimized in ethnic groups that embrace larger female body types and shapes. Nevertheless, it is clear that women of color are not impervious to Western standards of female beauty. In 2008, eye reshaping was the second most popular procedure among Asian American women and breast augmentation was highly popular among most ethnic groups (ASPS, 2009). In addition to examining more diverse ethnic groups, future research should explore attitudes toward cosmetic surgery in middle-aged lesbians. In general, lesbian identity has been identified as a protective factor against body dissatisfaction (Morrison et al., 2004), internalization of cultural standards of appearance (Share & Mintz, 2002), and disordered eating (Kozee & Tylka, 2006). It is possible that the greater body satisfaction (Morrison et al., 2004) and decreased importance of physical attractiveness (Siever, 1994) among lesbians may minimize the relevance and acceptance of cosmetic surgery in this group. Future research might also investigate the possibility of using the media to promote positive body image and attitudes toward aging in middle-aged women.

Another methodological limitation was that potential participants were aware of cosmetic surgery as the research focus, which may have cued demand characteristics as well as socially desirable responding against consideration of cosmetic surgery. A more subtle approach to recruitment would assist future studies to attenuate participant expectancies. Finally, the nonexperimental design of the study also prohibits the drawing of firm causal conclusions. The media may indeed shape positive attitudes toward cosmetic surgery. However, the converse causal assumption is equally plausible. That is, women with positive cosmetic surgery attitudes may actively seek out media containing mention of these procedures. Similarly, whereas poor body image and aging anxiety may engender positive attitudes toward cosmetic surgery, pro-cosmetic surgery views may also encourage body discontent and a fear of aging by cultivating the belief that “average” is a deficiency that must be improved. An alternative, and possibly more likely explanation, is that all of these relationships are reciprocal in nature, influencing each other in an ongoing cyclical fashion. Longitudinal studies and experimental research would provide further clarification regarding these issues.

In conclusion, ours is the first study to specifically examine determinants of attitudes toward cosmetic surgery in a nonsurgical population of middle-aged women, thus providing an important platform for further research. Multiple direct influences were identified, including both components of body image (i.e., body dissatisfaction and appearance investment). More importantly, a new predictor of cosmetic surgery attitudes was identified, namely aging anxiety, warranting further research as to its role in middle-aged women’s desired and actual use of these.
procedures. Finally, the present study extended beyond previous research by demonstrating both direct and indirect effects of media exposure, providing compelling evidence as to the powerful influence of media content in promoting acceptance of surgical routes to appearance enhancement. Our projection is that the exponential growth in the cosmetic surgery industry we documented at the start of this paper will likely continue.

Initial submission: February 14, 2009
Initial acceptance: July 31, 2009
Final acceptance: October 12, 2009

REFERENCES


### APPENDIX A

Mean Ratings for Appearance Focus and Representation of Beautiful Middle-Aged Women

<table>
<thead>
<tr>
<th>Television*</th>
<th>Appearance focus</th>
<th>Beautiful middle-aged women</th>
<th>Magazines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desperate Housewives</td>
<td>2</td>
<td>2</td>
<td>Who</td>
</tr>
<tr>
<td>Entertainment Tonight (ET)</td>
<td>–</td>
<td>1.33</td>
<td>OK</td>
</tr>
<tr>
<td>Extreme Makeover</td>
<td>–</td>
<td>–</td>
<td>OK</td>
</tr>
<tr>
<td>Bold and the Beautiful</td>
<td>2</td>
<td>2</td>
<td>OK</td>
</tr>
<tr>
<td>Nip Tuck</td>
<td>2</td>
<td>2</td>
<td>Popular</td>
</tr>
<tr>
<td>Sex and the City</td>
<td>1.67</td>
<td>2</td>
<td>Woman’s Day</td>
</tr>
<tr>
<td>Cashmere Mafia</td>
<td>2</td>
<td>2</td>
<td>Cleo</td>
</tr>
<tr>
<td>The Biggest Loser</td>
<td>–</td>
<td>–</td>
<td>Woman’s</td>
</tr>
<tr>
<td>What Not to Wear</td>
<td>–</td>
<td>–</td>
<td>Weekly</td>
</tr>
<tr>
<td>Trinny and Susannah</td>
<td>–</td>
<td>–</td>
<td>Cosmopolitan</td>
</tr>
<tr>
<td>Undress</td>
<td>–</td>
<td>–</td>
<td>InStyle</td>
</tr>
<tr>
<td>How to Look Good Naked</td>
<td>1.67</td>
<td>2</td>
<td>Harper’s Bazaar</td>
</tr>
</tbody>
</table>

(continued)
### APPENDIX A (continued)

<table>
<thead>
<tr>
<th>Television</th>
<th>Beautiful middle-aged women</th>
<th>Magazines</th>
<th>Beautiful middle-aged women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance focus</strong></td>
<td><strong>Appearance focus</strong></td>
<td><strong>Appearance focus</strong></td>
<td><strong>Appearance focus</strong></td>
</tr>
<tr>
<td>Friends</td>
<td>2</td>
<td>TV Soap</td>
<td>2</td>
</tr>
<tr>
<td>Days of Our Lives</td>
<td>2</td>
<td>Soap World</td>
<td>2</td>
</tr>
<tr>
<td>E News!</td>
<td>1.67</td>
<td>New Woman</td>
<td>1.67</td>
</tr>
<tr>
<td>Today Show</td>
<td>1.67</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Sunrise</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Note: 0 = no appearance focus/no representation of beautiful middle-aged women, 1 = some appearance focus/some representation of beautiful middle-aged women, 2 = large appearance focus/large representation of beautiful middle-aged women; appearance-related reality television programs were added in later and were not rated for appearance focus.

All television programs were on the air in Australia at the time of the study.