



## Acceptance of cosmetic surgery: Scale development and validation

Donna Henderson-King<sup>\*</sup>, Eaaron Henderson-King

*Grand Valley State University, 1 Campus Dr., Allendale, MI 49401, USA*

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### Abstract

We conducted a set of four studies with a total of 1288 adult and undergraduate women and men to develop the Acceptance of Cosmetic Surgery Scale. These studies provide evidence of this scale's reliability, as well as convergent and discriminant validity. Initial explorations using this 15-item scale indicate that acceptance of cosmetic surgery is negatively related to satisfaction with physical appearance and positively related to attitudes about make-up use. The acceptance of cosmetic surgery may be more related to fears about becoming unattractive than to hopes of becoming more attractive. Cosmetic surgery attitudes were positively related to age for women but not for men. The study's limitations and implications are discussed.

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### Introduction

Cosmetic surgery procedures have been performed at dramatically increased rates in recent years (Rohrich, 2003). The most recent available figures (which are conservative since they account only for surgeries conducted by members of the American Society of Plastic Surgeons, ASPS) indicate that cosmetic medical procedures continue to increase in popularity (ASPS, 2004). ASPS members conducted a total of 1,781,191 elective surgical procedures and 7,012,752 minimally invasive procedures (e.g., Botox

injections, chemical peels, etc.) during 2003. Certain procedures, such as eyelid surgery, liposuction, rhinoplasty, chemical peels, and dermabrasion, are especially popular, and some procedures have become much more so in recent years. For example, ASPS statistics reveal that buttock lifts increased by 78%, tummy tucks by 61%, and Botox injections by 267%, between the years of 2000 and 2003. As noted by Sarwer et al. (2003), numerous factors may be contributing to this increase in popularity, including advances in surgical procedures, lower costs and higher disposable income of patients, and increased emphasis on physical appearance. Moreover, individuals are increasingly exposed to the possibility of cosmetic surgery through their social networks. Media coverage of cosmetic surgery is now commonplace, as

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<sup>\*</sup> Corresponding author. Tel.: +1 6163312909; fax: +1 6163312480.

*E-mail address:* [hendersd@gvsu.edu](mailto:hendersd@gvsu.edu) (D. Henderson-King).

advertisements promise enhanced attractiveness, magazines tout the latest developments in surgical procedures, and television reality shows celebrate physical makeovers. Psychological research on cosmetic surgery has focused on patients' expectations and satisfaction regarding surgical outcomes (e.g., Cash, Duel, & Perkins, 2002; Ching, Thoma, McCabe, & Antony, 2003; Sarwer, Wadden, & Whitaker, 2002); however little is known about attitudes regarding cosmetic surgery more generally. Questions about cosmetic surgery attitudes among the general population, the degree to which they are changing over time, and the factors related to such attitudes, remain largely unexplored. In this paper, we present the development of the Acceptance of Cosmetic Surgery Scale (ACSS), a reliable three factor instrument that will allow researchers to more readily pursue such questions. We also begin the process of exploring the relationship between acceptance of cosmetic surgery and experiences of the body (e.g., body-esteem) and the self (e.g., possible selves).

One obvious way to measure attitudes about cosmetic surgery is simply to ask someone whether they would consider having cosmetic surgery. This certainly taps one dimension of people's acceptance of cosmetic surgery as a route to physical attractiveness; however, it is entirely possible to be accepting of cosmetic surgery and yet have no interest in utilizing it oneself. Thus, in order to assess attitudes beyond this important, but limited, dimension, we set out to develop a measure that would also capture the degree to which individuals accept cosmetic surgery for people in general, based on the motivation for having it done. We focused on two sources of motivation, and sought to measure acceptance of cosmetic surgery for social reasons and for intrapersonal reasons.

Cash (1985, 2002; Cash & Fleming, 2002) has contended that two perspectives might be taken in the psychology of physical appearance: the individual's subjective experience of appearance, and the view of persons as social objects. Furthermore, he argued that cosmetics and grooming practices are used in the management of both self-image and social impressions (Cash, 1987, 1988). Similarly, we propose that both of these perspectives are important in the way people view cosmetic surgery practices. Certainly, in regard to social motives, it is abundantly clear that people's self-conceptions are shaped by social norms

and expectations associated with a particular time and place. Mead (1934) argued that it is almost inconceivable that a person could develop a sense of self outside of the social milieu; and, physical attractiveness is an important thread in the social fabric of contemporary Western society.

To the extent that people are exposed to messages about the importance of attractiveness, they should be more concerned with their own appearance and, perhaps, more open to using the various means through which cultural standards can be achieved (Fredrickson & Roberts, 1997). For example, there is some evidence suggesting that as the number of diet and exercise advertisements in women's magazines has increased, there has been a corresponding rise in eating disorders (Wiseman, Gray, Mosimann, & Ahren, 1992). With regard to cosmetic surgery, Sarwer et al. (2003) found that women who were considering breast augmentation surgery reported a greater rate of appearance-related teasing than did women who were not seeking surgery. Morgan (1991) has argued that the pressure to strive for physical perfection is becoming so severe for women, in particular, that eventually women who refuse to submit to procedures such as cosmetic surgery will be seen as deviant.

Attitudes toward cosmetic surgery may also be influenced by intrapersonal factors. According to Haiken (1997), the idea that people consider cosmetic surgery because of a deep sense of personal inadequacy regarding their appearance has its roots in the work of Alfred Adler. The introduction of Adler's concept of the inferiority complex into mainstream American society in the 1920s allowed surgeons — as well as the general public — to reconstruct the prevailing view of cosmetic surgery. Instead of epitomizing the vanity of individuals, cosmetic surgery came to be viewed as something that enabled the individual to repair a damaged self-concept. Thus, over time, cosmetic surgery has come to be seen as a tool to be employed in the attempt to maintain or enhance self-esteem. This perspective has some validity; it is certainly the case that people are motivated to maintain and enhance their self-esteem (see Kunda, 1990, for a review). Various researchers have found that women report wanting cosmetic surgery in order to satisfy internal needs. For example, Davis (1995) argued that many of the women in her

sample who had had cosmetic surgery stated that they were motivated to do so more by internal feelings and desires (however, see Nisbett & Wilson, 1977, regarding the veracity of self-reports).<sup>1</sup> Similarly, Didie and Sarwer (2003) found that women who were considering breast augmentation surgery were more likely to endorse intrapersonal reasons (i.e., to feel more attractive or proportional) than social reasons (i.e., to improve dating or marital relations).

Although it is probably impossible to completely disentangle these two broad motives, evidence from people seeking cosmetic surgery indicates that intrapsychic concerns (e.g., wanting to feel better about oneself) and social concerns (e.g., wanting to be less self-conscious around others, or to look younger for social or business reasons) both figure in the desire to have cosmetic surgery (e.g., Davis, 1995; Pruzinsky & Edgerton, 1990). Thus, in addition to assessing the degree to which individuals would consider having cosmetic surgery, we also assessed how much this interest was informed by intrapersonal and interpersonal motives.

Recently Sarwer et al. (2005) examined cosmetic surgery attitudes among undergraduate women, and considered the relationships among these attitudes, experience with cosmetic surgery, and several constructs related to body image. For the purpose of their study they produced an eight-item Cosmetic Surgery Attitudes Questionnaire (CSAQ) designed to tap general attitudes about cosmetic surgery. Sarwer et al. report good internal consistency and some evidence of validity. For example, they found positive relationships among cosmetic surgery attitudes and variables such as appearance orientation and the influence of visual media on body image. This initial foray into cosmetic surgery attitudes helps to move the literature on cosmetic surgery attitudes away from a strictly clinical perspective focused primarily on the psychological responses to surgery, and toward a

clearer understanding of how the general population feels about surgical routes to appearance enhancement. It also helps to establish the relationship among cosmetic surgery attitudes and appearance-related psychological phenomena.

In the current paper, we present the development of a psychometrically sound instrument and provide strong evidence of reliability, and discriminant as well as convergent validity. To develop the ACSS we utilized samples that included both women and men, as well as people from across a wide span of ages. The ACSS also differs from the CSAQ in that it was designed to measure three distinct elements of cosmetic surgery attitudes: the degree to which an individual would consider having cosmetic surgery; acceptance of cosmetic surgery based on social motivation; and, acceptance of cosmetic surgery based on intrapersonal motivation.

### *Overview*

In this paper we describe four studies. In Study 1, we report the development of the ACSS and evidence of internal reliability. In Studies 2 and 3, we examine the scale's discriminant and convergent validity, and take an initial look at the relationship between cosmetic surgery attitudes and possible selves. In the final study, we explore the measure's test-retest reliability and provide further evidence of its validity.

## **Study 1**

The purpose of Study 1 was to develop a scale that would tap attitudes about cosmetic surgery among the general population. Our intent was not to design an instrument with which to assess individuals' suitability for cosmetic surgery or to predict satisfaction with it; instead it was to produce a measure of *acceptance* of cosmetic surgery as a route to improved physical appearance.

### *Method*

#### *Participants*

Questionnaires were sent to 1489 employees (including a wide variety of staff positions as well as faculty) at Loyola University of Chicago. A total of

<sup>1</sup> Although Davis asserts that women in her study decided to have cosmetic surgery for themselves and not for others, and includes examples of self-reports that clearly state this position, even those respondents who claimed to be internally motivated identified social and interpersonal factors that led to their bodily dissatisfaction. Thus, while we recognize the importance of intrapersonal factors in the decision to have cosmetic surgery, it seems also to be the case that such decisions are affected by the social context in which they occur.

683 respondents (433 women, 251 men, and 13 individuals who did not indicate their sex) returned the questionnaire, resulting in a response rate of 46%. Within this sample, 77% identified themselves as White, 7% as African American, 5% as Asian, and 3% as Hispanic. The remaining 8% identified with some other group or did not indicate their ethnicity. Respondents ranged in age from 18 to 72, and the mean age in this sample was 39.

### *Procedure*

An initial pool of 26 items that assessed various aspects of people's attitudes about cosmetic surgery was generated. In addition to the existing literature related to social and intrapersonal underpinnings of such attitudes, responses to open-ended questions about cosmetic surgery from earlier studies we conducted on women's body-esteem were helpful in developing specific items about the conditions under which cosmetic surgery might be considered.

Participants were informed of the purpose of the research and voluntary nature of their participation through a cover letter that accompanied a short questionnaire mailed to their campus address. They were asked to respond to each of the 26 cosmetic surgery attitudinal items on a seven-point scale; 1 indicated strong disagreement and 7 indicated strong agreement. When necessary, scoring was reversed so that in every case a high score indicated acceptance of cosmetic surgery. After responding to the attitudinal items, participants indicated their sex, age, and ethnicity.

### *Results and discussion*

The number of items was reduced to 17 by dropping items that were highly skewed, and by conducting an initial principal components analysis with oblique rotation and eliminating items that loaded on factors with fewer than four items. We also dropped items that had negative factor loadings when loadings were expected to be positive, or that had loadings below .50.

A principal components factor analysis with oblique rotation was conducted on the remaining 17 items. All of the items loaded on a single unrotated factor, and results from the rotated analysis yielded three separate components with eigenvalues

greater than 1.00. This three-component model accounted for 65.1% of the variance. A scree test also confirmed that no more than three components should be extracted. The first component (Intrapersonal) of the ACSS was comprised of seven items and represents an attitudinal component related to the self-oriented benefits of cosmetic surgery. Two of the items had to do with affordability rather than perceived benefits, and for conceptual clarity were dropped from the subscale. What characterizes the intrapersonal subscale is the notion that cosmetic surgery can offer intrapsychic benefits in the form of increased satisfaction with one's appearance or improvement of self-image. Five items comprised the second component (Social) that involved relatively social motivations for the decision to have cosmetic surgery. For example, the Social component included items that relate to an interest in appearing more attractive to one's partner and others, and benefits to one's career. Five additional items loaded on a third component (Consider). These items had to do with straightforward assessments of the likelihood that the respondent would consider having cosmetic surgery, or with conditions such as pain or side-effects that could influence such a decision.

We then conducted a final principal components analysis on the 15-item measure. All 15 items loaded on a single unrotated component and the rotated analysis yielded the three-component model (see Table 1). As can be seen in Table 1, the same analyses were conducted in Studies 2 and 3, each of which yielded similar results for the pattern matrix.<sup>2</sup>

### *Reliability*

Table 2 presents Cronbach's alpha coefficients, means, and standard deviations for each of the three subscales across the four studies.

<sup>2</sup> It should be noted that a total Acceptance score may also be obtained across all items of the ACSS. Alpha coefficients for all 15 items were consistently strong, ranging from .91 to .93 across three studies. Thus, if a single, total score is desirable (e.g., in the case of a study in which cosmetic surgery attitudes are not the central focus, or when there is no interest in exploring differential relationships across the subscales) the ACSS total score, which we refer to simply as Acceptance, provides a highly reliable assessment of the acceptance of cosmetic surgery.

Table 1  
Factor loadings for items meeting inclusion criteria

Item	Factors								
	Intrapersonal			Social			Consider		
	S1	S2	S3	S1	S2	S3	S1	S2	S3
1. It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look	<b>.79</b>	<b>.71</b>	<b>-.79</b>	-.02	-.05	-.07	.11	-.19	.17
2. Cosmetic surgery is a good thing because it can help people feel better about themselves	<b>.88</b>	<b>.89</b>	<b>-.90</b>	-.04	-.07	.03	-.01	-.05	-.00
3. In the future, I could end up having some kind of cosmetic surgery	.18	.01	-.23	-.03	.06	.02	<b>.72</b>	<b>-.81</b>	<b>.68</b>
4. People who are very unhappy with their physical appearance should consider cosmetic surgery as one option	<b>.82</b>	<b>.83</b>	<b>-.89</b>	-.00	.07	.00	.04	.05	.03
5. If cosmetic surgery can make someone happier with the way they look, then they should try it	<b>.79</b>	<b>.86</b>	<b>-.86</b>	.10	.03	-.01	-.01	.06	.01
6. If I could have a surgical procedure done for free I would consider trying cosmetic surgery	.03	.02	-.14	.11	.24	.11	<b>.84</b>	<b>-.72</b>	<b>.76</b>
7. If I knew there would be no negative side effects or pain, I would like to try cosmetic surgery	-.01	-.00	-.09	.15	.22	.08	<b>.79</b>	<b>-.76</b>	<b>.79</b>
8. I have sometimes thought about having cosmetic surgery	-.07	-.06	.14	-.04	-.08	.12	<b>.89</b>	<b>-.95</b>	<b>.82</b>
9. I would seriously consider having cosmetic surgery if my partner thought it was a good idea	.03	-.03	.36	<b>.72</b>	<b>.86</b>	<b>.64</b>	.10	-.02	.12
10. I would never have any kind of plastic surgery (R)	.18	.12	-.06	-.06	-.11	-.14	<b>.63</b>	<b>-.72</b>	<b>.68</b>
11. I would think about having cosmetic surgery in order to keep looking young	-.06	.24	-.11	<b>.52</b>	<b>.44</b>	<b>.73</b>	.41	-.14	-.13
12. If it would benefit my career I would think about having plastic surgery	.03	.14	-.30	<b>.84</b>	<b>.65</b>	<b>.59</b>	-.01	-.08	.05
13. I would seriously consider having cosmetic surgery if I thought my partner would find me more attractive	.03	-.05	-.01	<b>.95</b>	<b>.97</b>	<b>.85</b>	-.14	.08	.06
14. Cosmetic surgery can be a big benefit to people's self-image	<b>.72</b>	<b>.73</b>	<b>-.67</b>	.05	.04	.23	-.05	.04	-.04
15. If a simple cosmetic surgery procedure would make me more attractive to others, I would think about trying it	.12	.14	-.17	<b>.66</b>	<b>.58</b>	<b>.45</b>	.18	-.28	.42

Note: S1, Study 1; S2, Study 2; S3, Study 3. The scoring for item 10 is reversed (R).

Table 2  
Sample and scale descriptive statistics for the ACSS

Study	<i>N</i>	<i>M</i>	<i>SD</i>	$\alpha$
Study 1				
Intrapersonal	675	4.81	1.43	.88
Social	675	2.63	1.50	.88
Consider	672	3.43	1.77	.88
Study 2				
Intrapersonal	260	4.24	1.26	.88
Social	259	2.46	1.29	.86
Consider	261	2.91	1.65	.89
Study 3				
Intrapersonal	167	4.28	1.51	.91
Social	167	2.85	1.42	.84
Consider	167	3.43	1.61	.86
Study 4				
Intrapersonal	44 (41)	4.17 (4.18)	1.34 (1.27)	.88 (.89)
Social	44 (41)	2.26 (2.60)	1.26 (1.47)	.85 (.91)
Consider	44 (41)	3.43 (3.48)	1.80 (1.69)	.92 (.91)

Note: For Study 4, Time 2 values are in parentheses.

### Age and gender differences

We conducted hierarchical multiple regression analyses in which age and gender were entered first, followed by the Age  $\times$  Gender interaction term.

*Intrapersonal.* The analysis revealed a significant main effect for gender,  $b = -.36$  ( $SE = .11$ ),  $p < .005$ , with women expressing more positive attitudes toward having cosmetic surgery for intrapersonal reasons than men. There was also a significant main effect for age,  $b = .03$  ( $SE = .00$ ),  $p < .001$  with older participants having more favorable attitudes than younger participants.

*Social.* The analysis of the Social subscale revealed only a significant main effect for age, with older participants having more favorable attitudes toward having cosmetic surgery for social reasons than younger participants,  $b = .02$  ( $SE = .12$ ),  $p < .005$ .

*Consider.* For the Consider subscale, we found significant main effects for both gender,  $b = -.97$  ( $SE = .14$ ),  $p < .001$ , and age,  $b = .02$  ( $SE = .01$ ),  $p < .005$ . These main effects were qualified by a significant Age  $\times$  Gender interaction,  $b = -.03$  ( $SE = .01$ ),  $p < .05$ . For women, age was a positive predictor of considering cosmetic surgery,  $b = .03$

( $SE = .01$ ),  $p < .001$ ; for men there was no such relationship,  $b = .00$  ( $SE = .01$ ), *ns*.

The results of Study 1 provide initial indications that the ACSS has good internal reliability. We also found that age and attitudes toward cosmetic surgery were positively related, especially for women. Such findings may reflect Americans' fixation with appearing youthful and attractive, especially for women, and the desire of many to reduce the discrepancy between an aging self and a youthful ideal.

The next study was an attempt to replicate the factor structure found in Study 1 with a different sample. It was also designed to provide an assessment of the scale's convergent and discriminant validity. To this end, we included several measures that tapped domains that could reasonably be expected to relate to cosmetic surgery attitudes.

## Study 2

It has been well established in the attitude change literature that people's latitude of acceptance on a particular issue is positively related to their acceptance of more extreme positions (Eagly & Chaiken, 1993; Petty & Cacioppo, 1981). For example, those who favor the use of make-up should be more accepting of more extreme physical alterations. Thus, we predicted that attitudes toward make-up use would be positively related to cosmetic surgery attitudes.

Previous research has found that dissatisfaction with one's body is a major factor in the decision to have cosmetic surgery (Davis, 1995). Thus, we expected to find a negative relationship between acceptance of cosmetic surgery and feelings about one's appearance and attractiveness. On the other hand, we did not expect to find a relationship between acceptance of cosmetic surgery and people's reported weight. It is the subjective nature of body satisfaction that ought to be related to attitudes about cosmetic surgery; what should matter are people's *feelings* about their bodies or their weight, rather than their actual weight.

It might be argued that, since people who are high self-monitors are interested in how they appear to others, acceptance of cosmetic surgery would be positively related to self-monitoring. Self-monitoring, however, concerns the degree to which people will

alter their behavior in the interests of self-presentation to a particular audience, and is typically meant to refer to more mercurial aspects of social behavior, therefore, it should not extend to behaviors as permanent as cosmetic surgery. Consequently, we did not expect to find a relationship between cosmetic surgery attitudes and self-monitoring.

## *Method*

### *Participants*

As part of the requirement for an introductory psychology class at the University of Michigan, 261 students (149 female and 112 male) participated in this study. Within this sample, 69% identified themselves as White, 10% as African American, 14% as Asian, and 5% as Hispanic. The remaining 2% identified with some other group or did not indicate their race or ethnicity. The average age in this sample was 19.

### *Materials and procedure*

Participants completed questionnaires during group sessions scheduled separately for female and male participants. The size of the groups ranged from 3 to 10 participants. In addition to the ACSS, each questionnaire included the following measures.

The State Self-Esteem Scale (SSES; [Heatherton & Polivy, 1991](#)) was included as a multidimensional measure of self-esteem. This measure has been widely used and includes subscales related to performance, social, and appearance self-esteem. Scores on each subscale range from 1 to 5, with higher scores indicating higher levels of self-esteem.

The Body-Esteem Scale (BES; [Franzoi & Shields, 1984](#)) was used to assess participants' satisfaction with their bodies. The BES measures three aspects of body-esteem: for women these are Sexual Attractiveness, Physical Condition, and Weight Concern; for men the corresponding aspects are Physical Attractiveness, Physical Condition and Upper Body Strength. Respondents rate their feelings toward various parts of their bodies using a scale ranging from 1 (strongly negative) to 5 (strongly positive), so that higher scores indicate higher body-esteem.

[Snyder and Gangestad's \(1986\)](#) 18-item Self-Monitoring Scale was used to measure individual levels of self-monitoring. Scores can range from 0 to 18, with higher scores indicating higher levels of self-

monitoring. The Cronbach's alpha coefficient for this sample was .74.

Questionnaires for female participants also included the Miller Cox Attitudes About Makeup Scale (MCAAMS; [Miller & Cox, 1982](#)). Male participants received a version of this measure that was revised for the purposes of this study. While the MCAAMS was designed to assess a woman's personal feelings and experiences regarding makeup, the revised version assessed men's attitudes about makeup for women. Revisions entailed changing pronouns such as "I" and "my" to "a woman's." For example, instead of "I feel that makeup enhances my appearance," men responded to "I feel that makeup enhances a woman's appearance." Participants responded to each item on a scale from 1 (disagree strongly) to 5 (agree strongly). High scores indicated more positive attitudes towards makeup use. For this sample, Cronbach's alphas were .88 for women and .74 for men.

Participants were also asked to indicate their height and weight. From reported weight and height we computed a body-mass index (BMI) score ( $\text{kg}/\text{m}^2$ ).

## *Results and discussion*

### *Convergent validity*

[Table 3](#) presents correlations between the ACSS and those measures for which we predicted a significant relationship. As expected, there were significant positive relationships between the MCAAMS and each of the three subscales for both women and men. Thus, the more participants endorsed the use of makeup, the more accepting they were of cosmetic surgery.

As expected, appearance self-esteem was negatively related to the Social and Consider subscales of the ACSS. Social self-esteem was also negatively related to the Social subscale of the ACSS. Thus, there is some evidence that the lower a person's appearance and social self-esteem, the more likely she/he is to accept cosmetic surgery.

Sexual/Physical Attractiveness was negatively related to Consider for men and to Social for both women and men. However, while for men Upper Body Strength was negatively related to Social and Consider, for women Weight Concern was not related to the ACSS. Similarly, Physical Condition was negatively related to Social and Consider, but only for men.

Table 3  
Correlations between ACSS and measures assessing convergent validity

Measure	Intrapersonal		Social		Consider	
	Women	Men	Women	Men	Women	Men
MCAAMS	.32**	.27*	.39**	.34**	.34**	.25
SSES						
Social	-.21	-.22	-.23*	-.32**	-.20	-.23
Appearance	-.17	-.10	-.26*	-.28*	-.25*	-.33**
BES						
Sexual/Physical Attractiveness	-.08	-.13	-.22*	-.29*	-.20	-.33**
Weight Concern/Upper Body Strength	-.03	-.15	-.15	-.32**	-.16	-.33**
Physical Condition	-.03	-.22	-.10	-.26*	-.09	-.36**

\*  $p < .01$ .

\*\*  $p < .001$ .

### Discriminant validity

As might be expected, there was no significant relationship between any of the ACSS subscales and the SSES performance subscale (see Table 4). This aspect of self-esteem has to do with how one feels about such things as one's intelligence, success and abilities; thus, it should not be related to attitudes about cosmetic surgery. Further, as expected, self-monitoring was not related to attitudes toward cosmetic surgery. We also predicted that BMI scores would not be related to cosmetic surgery attitudes. This was the case for women; however, for men the lower their BMI, the more accepting they were of cosmetic surgery. Body weight is a domain of normative discontent for women (Rodin, Silberstein, & Striegel-Moore, 1984); however, men tend to be more satisfied with their body weight and, consistent with our BMI findings, young men who express dissatisfaction typically feel they are underweight (Connor-Greene, 1988).

Study 2 provides good evidence of the construct validity of the ACSS. It is noteworthy that scores on the Social subscale were negatively related to social self-

esteem. Concern with social standing more generally, in addition to concern simply with one's attractiveness, is associated with people's acceptance of cosmetic surgery. This finding underscores the importance of social factors in the acceptance of cosmetic surgery. Perhaps as importantly, the ACSS Social, and not the Intrapersonal, subscale was negatively related to Sexual/Physical Attractiveness. Such a finding indicates that the Intrapersonal and Social subscales measure meaningfully different aspects of people's attitudes toward cosmetic surgery. A third study was conducted in order to explore the relationship between cosmetic surgery attitudes and the self-concept.

### Study 3

One way in which bodily alterations can be viewed is through the lens of possible selves (Markus & Nurius, 1986). Possible selves are future-oriented conceptions of the self that can motivate the individual to achieve a desired self-image or avoid an undesirable conception of the self. Who is more likely to accept cosmetic surgery: Those who seek to avoid a feared self or those who seek the promise of a desired self? In Study 3, our goal was to consider the relationship between possible selves and acceptance of cosmetic surgery.

### Method

#### Participants

In this study 168 (99 female and 69 male) undergraduate students at Loyola University of Chicago

Table 4  
Correlations between ACSS and measures assessing discriminant validity

Measure	Intrapersonal		Social		Consider	
	Women	Men	Women	Men	Women	Men
SSES: performance	-.06	-.11	-.05	-.08	-.10	-.14
Self-monitoring	.11	.10	.06	.10	-.02	.06
BMI	.01	-.28*	.01	-.15	-.06	-.14

\*  $p < .01$ .



participated in large group sessions as part of their requirement for an introductory psychology course. Sixty percent identified themselves as White, 5% as African American, 13% as Asian, 8% as Hispanic, 5% Asian Indian, and the remaining participants identified as “other” or did not identify. The mean age was 19.

### Materials and procedure

Participants completed questionnaires in large group sessions. Questionnaires included the ACSS and demographic items. In addition, participants responded to questions about their current, desired and feared possible selves. Using a five-point scale (1, not at all; 5, very), they were asked to indicate the degree to which a set of attributes accurately described how they were now, what they hoped they would be in the future, and what they feared becoming. Those attributes pertaining to appearance (attractive, unattractive, overweight, fat, and thin) were combined into a single Attractiveness mean index for current, desired, and feared possible selves. Those attributes not related to appearance were combined into two indices: A general positive index (intelligent, happy, social, and successful), and a general negative index (confused, afraid, self-conscious, failure and lonely) for current selves. Alpha coefficients for all these indices ranged between .66 and .88.

### Results and discussion

Zero-order correlations between the ACSS and the possible selves indices are presented in Table 5. Hierarchical regression analyses examined the extent to which current, desired and feared selves pertaining to attractiveness predicted cosmetic surgery attitudes.

Current, desired, and feared attractiveness-related selves, as well as the general positive and negative indices for the current self, and sex, were entered into the model first, followed by the Sex  $\times$  Current Attractiveness, Sex  $\times$  Desired Attractiveness, and Sex  $\times$  Feared Unattractiveness interaction terms. As expected, the more participants feared becoming unattractive the more accepting they were of cosmetic surgery for social reasons,  $b = .36$  ( $SE = .12$ ),  $p < .005$  and for intrapersonal reasons,  $b = .30$  ( $SE = .13$ ),  $p < .05$ . In addition, fear of becoming unattractive was a positive predictor of willingness to consider having cosmetic surgery,  $b = .35$  ( $SE = .13$ ),  $p = .01$ ; however, this main effect was qualified by a significant Sex  $\times$  Feared Unattractiveness interaction,  $b = -.62$  ( $SE = .26$ ),  $p < .05$ . Simple effects analyses revealed that for males, feared unattractiveness was a significant, positive predictor of Consider,  $b = .67$  ( $SE = .19$ ),  $p < .001$ , while there was no significant relationship for women,  $b = .05$  ( $SE = .18$ ), *ns*.

There was also a significant Sex  $\times$  Desired Attractiveness interaction for Consider,  $b = .58$  ( $SE = .27$ ),  $p < .05$ . The interaction was a result of desired attractiveness negatively predicting Consider for men,  $b = -.54$  ( $SE = .23$ ),  $p < .05$ , but not for women,  $b = .04$  ( $SE = .15$ ), *ns*. That is, the more men hoped to become attractive the less likely they were to consider cosmetic surgery.

Thus, for this sample, cosmetic surgery seems primarily to offer a way of warding off feared possible outcomes, rather than a way of achieving desired levels of physical attractiveness. Research on negativity effects indicates that people tend to be more influenced by negative than positive information (Fiske, 1980). This bias may also operate at the level

Table 5  
Correlations between ACSS and other measures

Measure	1	2	3	4	5	6	7	8	9
(1) Social	–	.64*	.64*	.08	.06	.22*	–.08	.17	.15
(2) Intrapersonal	–	–	.57*	.09	.05	.18	–.11	.14	.04
(3) Consider	–	–	–	.24*	–.02	.23*	–.18	.24*	–.08
(4) Current unattractive	–	–	–	–	.05	.27*	–.31*	.35*	–.32*
(5) Desired attractiveness	–	–	–	–	–	.26*	.00	.09	–.20*
(6) Feared unattractiveness	–	–	–	–	–	–	–.02	.13	–.28*
(7) Current general positive	–	–	–	–	–	–	–	–.53*	.06
(8) Current general negative	–	–	–	–	–	–	–	–	–.07
(9) Sex (0 = f, 1 = m)	–	–	–	–	–	–	–	–	–

\*  $p < .01$ .

of the self-image, so that fears of looking bad may be a more powerful stimulus than dreams of looking better.

#### Study 4

In this last study, we examined the reliability of the ACSS over time, as well as the relationship between acceptance of cosmetic surgery and objectified body consciousness. McKinley and Hyde's (1996) measure of objectified body consciousness taps three aspects of this construct: (a) body surveillance — the extent to which women's relationship with their body is primarily evaluative, (b) body shame — the degree to which women feel shame about their bodies when they do not meet the cultural standard, and (c) control beliefs — the extent to which women believe they can control their appearance. McKinley and Hyde found that body shame was more strongly associated with body-esteem than were body surveillance or control beliefs, and, given this and our findings on feared possible selves, we expected body shame to be positively related to the ACSS.

#### Method

##### Participants

Participants were 44 Grand Valley State University female undergraduates in a social psychology course who received extra course credit for their participation. Eighty-nine percent of the participants were White. The average age of the students was 22.9.

##### Materials and procedure

Participants completed the ACSS and demographic items during a class session. Approximately three weeks later they completed a second questionnaire that included the ACSS and the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) measuring Surveillance, Body Shame, and Control Beliefs. Participants rated each of 24 items on a six-point scale ranging from 1 (strongly disagree) to 6 (strongly agree).

##### Results and discussion

Scores at Times 1 and 2 were significantly correlated for Intrapersonal,  $r(41) = .80, p < .01$ ;

Social,  $r(41) = .62, p < .01$ ; and Consider,  $r(41) = .82, p < .01$ , indicating that the ACSS is quite stable over time.

As expected, Body Shame was correlated with both the Intrapersonal subscale ( $r[39] = .43, p < .01$ ) and the Social subscale ( $r[39] = .40, p < .05$ ). However, the relationship between Body Shame and Consider did not reach significance ( $r[39] = .25, ns$ ). This latter finding indicates that women who report little shame with their bodies are as likely to consider cosmetic surgery as those who are ashamed of their bodies. Both Surveillance and Control Beliefs were unrelated to the ACSS.

#### General discussion

In the current set of studies we set out to (a) develop a measure that would assess attitudes about cosmetic surgery, and (b) explore some of the factors that relate to these attitudes. Numerous measures that assess feelings about the body and attitudes about physical appearance have been developed (e.g., Franzi & Shields, 1984; McKinley & Hyde, 1996), allowing researchers to pursue questions about social and cultural influences on the psychology of the body. The current research extends this work by developing a reliable and valid scale to assess attitudes about surgical procedures used to change physical appearance. It also provides evidence that attitudes toward cosmetic surgery are related to both age and gender, attitudes about makeup, body-esteem and body shame, and feared possible selves. Thus, the ACSS provides a tool with which to examine the ways in which personal experiences, individual differences, and social and cultural factors, are related to people's acceptance of cosmetic surgery.

We consistently found greater acceptance of cosmetic surgery for intrapersonal reasons than social reasons. Such findings support previous research indicating that people report internal rather than external reasons for undergoing cosmetic surgery (Didie & Sarwer, 2003). This focus on self-motivation is not surprising, especially in Western, individualist contexts; however, such an emphasis obscures both the power of social influence and the interconnectedness of social and personal motivations. For example, a close reading of Davis (1995) reveals that even as women insisted that they had cosmetic surgery for

*themselves*, their accounts also included descriptions of actual or feared humiliation due to others' comments. Our findings also reflect the link between social factors and attitudes toward cosmetic surgery. Despite stronger endorsement of intrapersonal reasons for cosmetic surgery, satisfaction with sexual and physical attractiveness was related to the Social, but not Intrapersonal, subscale of the ACSS. Thus, for women and men, feelings of dissatisfaction with attractiveness related more strongly to external motivations for cosmetic surgery (for the sake of how one appears to others), rather than to more internal motivations (in order to feel better about oneself).

Indeed, how do we extract the individual from the social context? Bartky (1990) has argued convincingly that concerns about physical appearance and adherence to social norms of attractiveness become deeply personalized and internalized. And, in the age of marketing and commercialization, cosmetic surgery is represented as yet another of the many tools available to sculpt one's body. In recent years, television programming on cosmetic surgery has reinforced the social value of physical attractiveness as it has normalized surgical "solutions." Moreover, media representations of cosmetic surgery can emphasize intrapersonal reasons for having cosmetic surgery even as they exert social influence.

Our findings suggest that feared possible selves are more powerful predictors of cosmetic surgery attitudes than are desired possible selves; however, the issue of motivation due to feared versus desired possible selves merits additional consideration. In this research we examined fears and desires related to relatively abstract notions of attractiveness rather than about particular physical characteristics (e.g., nose shape, breast size, cellulite). Moreover, we studied acceptance of cosmetic surgery in general, not of specific surgical procedures. It may well be that greater specificity regarding physical characteristics and procedures would result in a different pattern of results from those presented here. For example, the wish for specific physical characteristics may be more strongly related to the acceptance of cosmetic surgery than is the general desire for attractiveness. Furthermore, our research focuses primarily on the general population, not specifically on those who have had cosmetic surgery. It may be that at least some of those

who opt to have cosmetic surgery are driven more by aspirations toward some sort of ideal than by fears of unattractiveness. Future research should explore more fully the extent to which fears, hopes, and desire are predictive of cosmetic surgery attitudes among both the general population and those who are actively considering or have had cosmetic surgery.

The current results are consistent with those of Sarwer and his colleagues (Sarwer et al., 2005), who recently found that cosmetic surgery attitudes are associated with body dissatisfaction, as well as investment in appearance. In Study 2, we found that dissatisfaction with one's appearance was associated with greater acceptance of cosmetic surgery. In Study 3, the fear of becoming unattractive was a positive predictor of cosmetic surgery attitudes. And, in Study 4, increased levels of body shame were associated with accepting cosmetic surgery for social and intrapersonal reasons. However, body surveillance, which may reflect body image investment, was unrelated to cosmetic surgery attitudes. Thus, there is mounting evidence of a connection between feeling dissatisfied with physical appearance and acceptance of cosmetic surgery.

Our findings are also consistent with a considerable body of theory and research (e.g., Bartky, 1990) indicating that women tend to be concerned with their outward appearance because of their desire to meet social expectations of beauty. Fredrickson and Roberts (1997) argue that women are socialized to see themselves as objects to be looked at and, consequently, tend to view themselves from the perspective of others. We 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.

Although many of the expected relationships between the ACSS and other measures emerged for women, there were a few instances in which they were significant only for men. For example, considering cosmetic surgery was related to both desired attractive selves and feared unattractive selves for men, but not for women. Similarly, considering cosmetic surgery was related to all of the body-esteem measures for men, but not for women. Recall also that neither was body shame (which we examined only among women) related to considering cosmetic surgery. One possible explanation for this is that, perhaps because physical

appearance tends to be of greater concern for women (see Fredrickson & Roberts, 1997), women's ratings of various parts of their bodies tend to be more *variable* than is the case for men (Franzoi & Shields, 1984). In other words, women are more likely to have positive feelings about some parts of their bodies and negative feelings about other parts, whereas men's ratings tend to be more consistent across body parts. Therefore, it may be more fruitful to examine (dis)satisfaction with specific parts of the body in predicting women's consideration of cosmetic surgery. This approach could also be useful with men, although greater consistency in men's self-ratings may make specificity a less critical issue in predicting whether they would consider cosmetic surgery.

#### *Limitations and recommendations for future research*

One limitation of the current research is that the data were collected solely within university settings, and primarily with undergraduate students; thus, the extent to which the results are generalizable remains a question. However, it is the case that (a) Study 1 was conducted with staff and faculty, not with students; and (b) the student samples do seem to mirror current cultural trends. First, subsequent analyses revealed that, in Study 3, women and men differed in their self-ratings of attractiveness with women viewing themselves as more unattractive, and expressing greater fear of unattractiveness and stronger hope for attractiveness than did the men. Furthermore, in Study 2, women were lower on the weight-esteem and physical-esteem subscales of the BES than were men. Such findings are consistent with past research demonstrating more body dissatisfaction among women (e.g., McCauley, Mintz, & Glenn, 1988; McKinley, 1998; Wardle & Marsland, 1990). However, future research should be conducted with more diverse populations.

The non-collegiate sample in Study 1 allowed us to consider in an age-diverse group whether age was related to acceptance of cosmetic surgery, and we found a positive relationship for women. These findings are cross-sectional though, and our understanding of the relationship between age and cosmetic surgery attitudes would benefit from longitudinal research.

We suggest several additional avenues for future research. First, the link between acceptance of cosmetic surgery and possible selves could be examined with

greater specificity in terms of both surgical procedures and physical characteristics. Also, the degree to which individuals accept the idea of body alterations may influence not only their self-perceptions, but also their perceptions of others who have undergone, or who have considered but decided against, cosmetic surgery procedures. Future research could explore this relationship. In addition, given the proliferation of advertising about cosmetic surgery, as well as increasing rates of cosmetic surgery procedures, future research should also assess whether the acceptance of cosmetic surgery is changing across time.

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