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## Potential Predictors that Influence Women to Undergo Cosmetic Surgery

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### Abstract

There may be relationships among collectivism, self-esteem, and religiousness in relation to individual acceptance of cosmetic surgery. This present study hypothesized that both self-esteem and religiousness would be negatively correlated with individual acceptance of cosmetic surgery. It was also hypothesized that an individual with higher levels of collectivism would be more likely to show higher levels of acceptance of cosmetic surgery. A multiple regression analysis expected self-esteem, collectivism, and religiousness to be the significant predictors of the acceptance of cosmetic surgery. Questionnaire data were collected from 565 female college students from a Christian university in the southeastern United States. Based on data analyses, it was found that self-esteem and collectivism showed no significant relationships with the acceptance of cosmetic surgery. However, religiousness presented a negative correlation with the acceptance of cosmetic surgery. Moreover, religiousness was revealed to be a significant predictor of the acceptance of cosmetic surgery based on the multiple regression data analysis.

### Potential Predictors that Influence Women to Undergo Cosmetic Surgery

Cosmetic surgery is a common procedure performed among many people, especially females. The American Board of Cosmetic surgery (n. d.) clarified the difference between cosmetic surgery and plastic surgery. Cosmetic surgery focuses on improving a patient's physical appearance. On the other hand, plastic surgery is dedicated to reconstructing facial and body defects or correcting dysfunctional areas of the body because of burns, disease, or birth disorders. The American Society of Plastic Surgeons (2016) reported that the overall percentage of cosmetic surgery performed in 2016 increased compared to 2015. The American Society of Plastic Surgeons (2016) reported that the overall percentage of cosmetic surgery performed in 2016 increased compared to 2015. This institution also revealed that the combined total of cosmetic surgery procedures was 12,792,377 in 2015; this increased to 13,654,349 in 2016. In the United States, the cost of these procedures exceeded 15 billion dollars for the first time. Fifty-six percent of the cost came from surgical cosmetic procedures, including eyelid surgery and breast augmentation, and forty-four percent came from nonsurgical cosmetic procedures, such as Botox. In addition, the rates of cosmetic surgery have increased for patients between the ages of 13 and 55, but those whose age ranged from 35 to 50 accounted for 38.8% for both surgical and nonsurgical procedures (The American Society of Plastic Surgeons, 2016).

Due to the prevalence of cosmetic surgery, many studies have been done to explore factors that influence women to undergo cosmetic surgery. According to Gimlin (2007), the reduced cost of cosmetic surgery procedures, women's increased earnings,

and easier access to the procedures contributed to the increasing popularity of cosmetic surgery. Furthermore, women today view cosmetic surgery as an easy way of taking control of their bodies and improving their appearance. Gimlin (2010) mentioned that many females were willing to undergo cosmetic surgery and sacrifice their own authentic look for an artificially enhanced face. Women's willingness to enhance their appearance is related to their negative past experience because females who had experienced insults and humiliation in regard to their physical appearance tended to exhibit the greater likelihood of undergoing cosmetic surgery (Markey & Markey, 2009; Soest, Kvalem, Skolleborg, & Roald, 2006). Also, the lower levels of self-ratings of physical attractiveness, body satisfaction, and body appreciation were significantly associated with women's consideration of cosmetic surgery (Brown, Furnham, Glanville, & Swami, 2007; Jung, & Hwang, 2016; Soest et al., 2006; Swami, 2009; Swami, Hwang, & Jung, 2012).

In addition to women's internal motivations for undergoing cosmetic surgery, external or sociocultural factors influence women to consider cosmetic surgery by putting a great amount of pressure on females, expecting them to conform to social standards of beauty, and justifying the pursuit of cosmetic surgery (Furnham & Levitas, 2012). Henderson-King and Brooks (2009) also revealed that women who internalized social messages about materialism and societal standards about beauty were more prone to accepting cosmetic surgery than those who did not. Functioning as one of the significant societal message conveyers, mass media has a huge influence in encouraging women to undergo cosmetic surgery. Sarwer, Grossbart, and Didie (2003) mentioned that mass

media is often used to advertise cosmetic surgery and plays a critical role in raising public awareness of the advantages of cosmetic surgery. Women who had an increased exposure to advertisements and television programs about cosmetic surgery were more likely to internalize media messages and undergo cosmetic surgery (Furnham, & Levitas, 2012; Jung, & Hwang, 2016; Swami, 2009). Moreover, women's eagerness to be more like their favorite celebrities from mass media was correlated with higher levels of the acceptance of cosmetic surgery (Jung, & Hwang, 2016).

Although the foregoing research has adequately established several factors that motivate women to undergo cosmetic surgery, certain variables need further investigation to see if they are predictors of individual acceptance of cosmetic surgery. The particular variables that need further investigation are collectivism, self-esteem, and religiousness. Before exploring research that studied those variables in relation to the acceptance of cosmetic surgery, it is crucial to understand the definitions of the variables and the rationale of how they could be associated with the acceptance of cosmetic surgery.

First of all, it is important to understand the definition of culture and aspects of collectivism. Hofstede (1984) described *culture* as a person's collective programmed mindset that plays an essential role in impacting how people interpret the world, internalize moral values, and make sense of what behaviors are encouraged or discouraged. Although many cultural-group studies divide culture into collectivism and individualism, Hofstede (1984) suggested that it is fundamental to acknowledge that the two cultural dimensions are divided depending on the levels of collectivism, representing interdependence, which individuals in society maintain. Thus, understanding collectivism

is necessary to know the degree to which one internalizes cultural values. Hofstede (1984) described a characteristic of those with more collectivism and contended that those who were more collectivistic were often afraid to violate social expectations and tended to prefer to maintain group harmony. Also, they were more likely to accept socially reticent behaviors and cultural standards and exhibit higher levels of social anxiety. Furthermore, people with higher levels of collectivism were willing to sacrifice themselves and follow the group standards or interests because they considered a group as the primary reality and standard (Kuppens, Realo, & Diener, 2008; Schreier et al., 2010). Based on these articles, those who are characterized as more collectivistic will be more likely to assimilate to group standards and follow social beauty standards by considering or actually undergoing cosmetic surgery.

Self-esteem is another variable that has been considered as one of the significant predictors of undergoing cosmetic surgery. Rosenberg (1979) defined self-esteem as the positive or negative images that individuals possess about themselves. Self-esteem is regarded as a key component to positive and healthy development. Mediating the relationships between environmental impacts and developmental influences, self-esteem is considered to be a product of these inner and outer influences of people (Michaels, Barr, Roosa, & Knight, 2007). Self-esteem is particularly associated with women's physical appearance because their lower levels of body satisfaction were associated with the lower levels of self-esteem (Furnham & Levitas, 2012; Tiggemann, 2005; Webster & Tiggemann, 2003). Moreover, females who had lower levels of body satisfaction were more likely to undergo cosmetic surgery (Furnham et al., 2007; Jung & Hwang, 2016;

Soest et al., 2006; Swami, 2009; Swami, Hwang, et al., 2012). Thus, it appears likely that some women might attribute their lower self-esteem and body satisfaction to their outer beauty and physical appearance and eventually seek cosmetic surgery as a result.

Religiousness is the final area that needs to be more explored for its relation to cosmetic surgery. Hill and Hood (1999) defined religiousness as 1) the degree of how religious individuals are and 2) the degree to which their religious beliefs may be observed in their lives. Often, religiousness is referred to as the extent to which people understand a particular faith system and how often they engage with their religious institutions (Alston, 1975; Burkhardt & Solari-Twadell, 2001). The significance of religiousness is demonstrated when it is seen to function as a moral source in people's lives (Widdows, 2004). Geyer and Baumeister (2005) maintained that religiousness is strongly related to one's sense of morality and that many religious people regard their religion as the main source of morality, for them personally, and for society at large. Religiousness is a moral standard that is an influence in changing or shaping people's views toward controversial societal and ethical issues; two prime examples are abortion and euthanasia (Cochran, Chamlin, Beeghley, Harnden, & Blackwell, 1996; Wenger & Carmel; 2004). Although less dramatic than abortion and euthanasia, cosmetic surgery has become a societal because of its physical and psychological consequences (Swami, Campana, & Coles, 2012). Religiousness, which shapes one's views about societal or ethical issues in the actions of its role as a moral standard, could play an important role in affecting one's degree of the acceptance of cosmetic surgery.

## **Collectivism, Self-esteem, and Religiousness in Relation to Cosmetic Surgery**

### **Collectivism and Cosmetic Surgery**

No study has been done to see the direct effect of collectivism on the acceptance of cosmetic surgery. A study done by Jung and Hwang (2016) suggest that those who were in a collectivistic culture were highly likely to consider undergoing cosmetic surgery because of their willingness to follow social standard. These two authors purported to see cultural-group differences in the levels of the acceptance of cosmetic surgery between South Korean females and the U.S. females. Typically, Asian countries, such as China, Japan, and South Korea, are considered to be countries where collectivistic values are more dominant compared to America and Western Europe (Green, Deschamps & Paez, 2005; Oyserman, Coon, & Kemmelmeier, 2002). The study's results revealed that Korean female participants with higher levels of celebrity worship were more likely than the American participants to follow social standards and accept cosmetic surgery. The findings of this study could be explained by those with higher levels of collectivism who are often willing to conform to group standards even if it means that they have to sacrifice their uniqueness and interests (Hofstede, 1984; Kuppens et al., 2008; Schreier et al., 2010). Also, one's willingness to conform in society was revealed to be pertaining to the greater likelihood of accepting cosmetic surgery (Farshidfar, Dastjerdi, & Shahabizadeh, 2013). The association among Korean participants between higher levels of celebrity worship and higher scores on the acceptance of cosmetic surgery appears to imply that their higher levels of collectivism



and willingness to conform to a societal beauty standard contributed to the higher levels of acceptance of cosmetic surgery.

Another study conducted by Ghotbi and Khalili (2017) suggested that the differences existed in the levels of the acceptance of cosmetic surgery among collectivistic countries; those who focused on following the standard of society and social popularity were more likely to positively view cosmetic surgery. These researchers recruited participants from some collectivistic countries, such as Japan, China, and South Korea, and examined if they had different views toward cosmetic surgery. The study results showed that Korean participants put much emphasis on the importance of the perceived individual and social popularity among other people, and exhibited a greater willingness and acceptance of undergoing cosmetic surgery. According to Ghotbi and Khalili (2017), compared to the Korean participants, many Japanese and Chinese respondents placed less emphasis on the perceived individual and social popularity gained through undergoing cosmetic surgery. Also, they emphasized the importance of individual uniqueness while being part of a collectivistic society; thus, they were more likely to present negative attitudes toward undergoing cosmetic surgery. This study indicates that even in some countries where collectivistic values are highly established, individuals vary in the degree to which they internalize and understand collectivism. Specifically, the degree to which individuals accept collectivistic aspects associated with the assimilation of social standard and popularity somewhat influences their attitudes toward undergoing cosmetic surgery.

The two studies above present the possibility of the influence of collectivism on the acceptance of cosmetic surgery. However, how collectivism itself is associated with individual acceptance of cosmetic surgery should be studied to compensate for some weaknesses of the studies. One of the limitations results from only seeing cultural group differences in the acceptance of cosmetic surgery (Jung & Hwang, 2016). Other limitations include gathering participants only from Asian countries and using some open-ended questions which make it difficult for the participants' individual scores on collectivism to be compared (Ghotbi & Khalili, 2017). Despite some limitations of these studies, some important implications about collectivism need to be noted. Those who are in a collectivistic culture tend to emphasize societal beauty standards compared to others in an individualistic culture (Jung & Hwang, 2016), although there were some individual differences in the degree of accepting and internalizing collectivistic values (Ghotbi & Khalili, 2017). These studies show that it is likely that collectivistic values may be a determining factor that influences women to undergo cosmetic surgery. Based on these studies, it is hypothesized that there will be a positive correlation between collectivism and the acceptance of cosmetic surgery, suggesting that those who accept more collectivistic aspects of being willing to follow societal standards will be likely to undergo cosmetic surgery.

### **Self-esteem and Cosmetic Surgery**

The relationship between self-esteem and cosmetic surgery has been studied in some different countries and with diverse sample sizes. Kalantar-Hormozi, Jamali, and Atari (2016) recruited female participants in a university setting and found a negative

relationship between self-esteem and cosmetic surgery. Also, Swami, Campana, and et al. (2012) in Britain showed that lower self-esteem was related to greater likelihood of undergoing cosmetic surgery. However, it is difficult to conclude in confidence that self-esteem is a significant factor that influences individual acceptance of cosmetic surgery because the relationship between self-esteem and cosmetic surgery did not emerge in all studies. Conducting conducted also in Britain, Swami, Chamorro-Premuzic, Bridges, and Furnham (2009) found self-esteem to be a non-significant predictor of cosmetic surgery. Moreover, Farshidfar et al. (2013) revealed that self-esteem was not presented as a significant predictor of cosmetic surgery among Iranian male and female participants. Targeting Norwegian female respondent, Soest et al. (2006) did not find any specific association between self-esteem and cosmetic surgery.

According to research that studied the correlation between self-esteem and cosmetic surgery, the relationship needs to be more explored because of the previous studies' results that were somewhat conflicting. Some of these studies revealed that self-esteem was negatively correlated with the acceptance of cosmetic surgery and a significant predictor of cosmetic surgery (Kalantar-Hormozi et al., 2016; Swami, Campana, et al., 2012). In other studies, on the other hand, self-esteem was a nonsignificant factor to predict one's motivation to have cosmetic surgery (Farshidfar et al., 2013; Soest et al., 2006; Swami et al., 2009). Also, more research that targets an American population is needed considering the fact that many studies have sought to explore the relationship between self-esteem and cosmetic surgery mostly in European countries and a Middle-Eastern country, such as Britain, Norway, and Iran (Farshidfar et

al., 2013; Kalantar-Hormozi et al., 2016; Soest et al., 2006; Swami et al., 2009; Swami, Campana, & et al., 2012). Moreover, research needs to increase a sample size in order to find the relationship, considering sample size limitations suggested in some previous studies (Farshidfar et al., 2013; Swami et al., 2009). Specifically, it is expected to see a negative association between self-esteem and cosmetic surgery.

### **Religiousness and Cosmetic Surgery**

In order to see the connection between religiousness and cosmetic surgery, Furnham and Levitas (2012) conducted research by collecting a sample of 204 British participants. These authors found evidence that those with higher scores on a religiousness scale reported lower scores on the acceptance of cosmetic surgery. Based on this finding, Furnham and Levitas (2012) suggested that those who were more religious and possessed more conservative faith had more negative views about deceiving other people, which was related to lower levels of the acceptance of cosmetic surgery. Prooijen and Lange (2016) stated that a majority of today's religions emphasize honesty as an essential virtue. Especially those who are devoutly religious and consistently live their faith place more emphasis on honesty (Desmond & Kraus, 2014; Storch & Storch, 2001). Many cosmetic surgery procedures alter people's original looks or lead to dramatic changes in their facial features. Thus, it is likely that some religious people might recognize this alteration obtained through cosmetic surgery as lying to other people. Moreover, Furnham and Levitas (2012) stated that religious authorities in Christianity tend to emphasize the view that people should be more concerned about strengthening and practicing their religious beliefs than focusing on their outer beauty.

Based on religiousness that pertains to honesty as a moral value and a specific religious belief that places less emphasis on outer beauty, religiousness is a potential factor that determines one's attitude toward cosmetic surgery. Nevertheless, research attempting to find the relationship between religiousness and cosmetic surgery is sparse although religiousness and other controversial social issues, such as abortion, have been studied. Furthermore, the study conducted by Furnham and Levitas (2012) presents a limitation that a single question to measure one's religiousness levels was used. Thus, to compensate for the limitation, a scale with a spectrum representing a variety of questions should be used. Based on the study by Furnham and Levitas (2012), it is reasonable to hypothesize that religiousness will be negatively associated with the acceptance of cosmetic surgery.

### **The Present Research**

Previous research that studied collectivism and cosmetic surgery focused on seeing the group differences between a collectivistic country and an individualistic culture or among collectivistic countries. However, the present study expected to see the impact of individual scores of collectivism on the acceptance of cosmetic surgery. With regard to self-esteem and cosmetic surgery, there are some conflicting results about the relationship that might result from a sample size, and research that targets American population is sparse. Thus, the present study replicated those previous studies to find a negative correlation between self-esteem and cosmetic surgery. Lastly, the present study sought to replicate a previous study that found a negative association between religiousness and cosmetic surgery because of its limitation related to a measurement.

The present study was conducted to extend previous research and compensate for limitations in looking for the relationships between collectivism, self-esteem, religiousness, and the acceptance of cosmetic surgery.

### **Hypotheses**

Specifically, the present study sought to investigate the four specific hypotheses by using correlation analyses and multiple regression analysis.

The hypotheses are as follows:

1. There will be a positive correlation between participants' scores on a collectivism scale and their acceptance of cosmetic surgery.
2. There will be a negative correlation between participants' scores on a self-esteem scale and their acceptance of cosmetic surgery.
3. There will be a negative correlation between participants' scores on a religiousness scale and their acceptance of cosmetic surgery.
4. Collectivism, self-esteem, and religiousness will all be significant predictors of the acceptance of cosmetic surgery.

### **Method**

#### **Participants**

This present study used a convenience sampling and gathered participants who voluntarily and willingly participated in the study. Since cosmetic surgery procedures are mostly performed among women, the present study confined the participants to female students. The participant group consisted of 565 female college students, ranging in age from 18 to 24, and they were recruited from a Christian university in the southeastern

United States. The fact that participants were collected from a Christian college explains why the majority of the respondents were Christians (98.8%), although other religions, including Catholic (0.4%), Buddhist (0.2%), non-believers (0.5%), and other religions (0.2%) were represented in the current study. Ethnic groups of the participants include Caucasian, Hispanic or Latino, Asian/ Pacific Islander, and Other. Most of the respondents were of Caucasian descent (81.2%) along with other ethnic participants who were Hispanic or Latino (5.5%), Asian/ Pacific Islander (4.6%), and Other (8.7%).

### **Measures**

The respondents were given four different self-report scales: Personal Cultural Orientations Scale, Self-Esteem Scale, Mature Religious Scale, and Acceptance of Cosmetic Surgery Scale. Furthermore, the respondents were asked to answer some demographic questions that included sex, age, ethnicity, and religiousness.

**Personal Cultural Orientations scale.** The Personal Cultural Orientations scale is based on Triandis and Gelfland (1998) and purports to measure one's levels of collectivism and individualism. This scale has 66 items, but only 12 items that measure one's collectivism or interdependence (INT), were used in the present study. The 12 questions are rated on a 7- point Likert scale (from 1 = Strongly Disagree and 7 = Strongly Agree). All the reliability scores for sub-scales, including these two scales, are high, ranging from 0.72 to 0.84.

**Self-esteem.** The Rosenberg Self-Esteem scale is a popular scale used to measure individuals' positive and negative feelings about themselves. This scale includes 10 items, and five items are reversed-coded questions. Each of these items was answered by

respondents using a four point scale (1= strongly disagree, 4 = strongly agree). A Guttman scale coefficient score for this scale is 0.92, indicating that it has a great internal consistency.

**Mature Religiosity scale.** The Mature Religiosity Scale is a scale that was originally created by Vries-Schot, Uden, Heitink, and Pieper (2008). This scale contains sixteen items in total, assesses a person's faith, and identifies strengths and weaknesses in the person's religiousness. Although this instrument purports to measure one's general religiousness, it has been usually tested and verified specifically among Protestant Christians in clinical and church settings. Thus, it is likely that the scale items that include the word "God" refer to God in Christianity and reflect more of Christian perspectives than those of other religions. The participants' religiousness was rated on a five-point agree-disagree scale from 1 (totally agree) to 5 (totally disagree). This scale is shown to have high Cronbach's alpha (0.92).

**The Acceptance of Cosmetic Surgery scale.** The Acceptance of Cosmetic Surgery scale is used to examine what factors motivate people to undergo cosmetic surgery. It includes 15 questions that are divided into three 5-item subscales: Intrapersonal, Social, and Consider. Intrapersonal purports to measure one's thoughts on the benefits of undergoing cosmetic surgery. The Social subscale assesses one's motivation of having cosmetic surgery. Consider subscale examines the probability that a person would think about undergoing cosmetic surgery. The questions are rated on a seven point scale (1 = disagree a lot, 7 = agree a lot). The convergent and discriminant validity of these three subscales are shown to have higher scores, ranging from 0.84 to



0.95. Also, the acceptance of cosmetic surgery scale has higher internal validity ( $r = .80$  for Interpersonal,  $r = .62$  for Social, and  $r = 0.82$  for Consider).

**Demographic variables.** Participants were asked to report their sex, ethnicity, and religion. The survey did not require the participants to report their exact age, but asked if their age ranged between 18 and 24.

### **Procedure**

Once the IRB approved this study, an online survey was created by using an online survey generator, Qualtrics. The survey had four measures and was posted on the homepage of the department of psychology in the university. However, students who were in other academic disciplines could participate in the survey. The survey provided the respondents with an online consent form informing them that their responses would be anonymous and would not be used for other purposes except for the present study. At the end of the consent form, the participants were required to agree to a consent statement before they were able to access the given survey.

### **Results**

The present study computed the correlations among all the study variables: the acceptance of cosmetic surgery, collectivism, self-esteem, and religiousness, while controlling for participants' ethnicity. The statistical results are presented in Table 1.

Table 1. *Descriptive Statistics and Correlations for the Acceptance of Cosmetic Surgery, Collectivism, Self-esteem, and Religiosity.*

Variable	1	2	3	4
1. Acceptance of Cosmetic Surgery				
2. Collectivism	.008			
3. Self-esteem	.033	.109**		
4. Religiosity	-.224**	.024	-.024	
<i>M</i>	45.15	108.95	17.27	7.033
<i>SD</i>	20.07	14.68	2.27	8.99

Note. N=565. \*  $p < .05$  \*\*  $p < .001$

The finding of this study disconfirmed the first hypothesis, showing that collectivism was not significantly correlated with the acceptance of cosmetic surgery,  $r(563) = .008$ ,  $p = ns$ . Moreover, the second hypothesis was not consistent with this study's result that revealed no significant association between self-esteem and the acceptance of cosmetic surgery,  $r(563) = .033$ ,  $p = ns$ . Despite these non-significant correlations, the study's result confirmed the third hypothesis. As hypothesized, religiosity was strongly related to the acceptance of cosmetic surgery,  $r(563) = -2.2$ ,  $p < 0.01$ . Specifically, religiosity had a negative relationship with the acceptance of cosmetic surgery, indicating that when one's levels of religiosity are higher, the likelihood of undergoing cosmetic surgery is lower. Although the correlational analysis showed the correlations of the variables on the acceptance of cosmetic surgery, it was not possible to see if the chosen predictors had an impact on the outcome variable. Thus, a multiple regression analysis was conducted as well.

Table 2. *Summary of Multiple Regression Analysis for Measures of Collectivism, Self-esteem, and Religiousness on Acceptance of Cosmetic Surgery.*

Acceptance of Cosmetic Surgery				
Variable	B	$\beta$	t	p
Collectivism	.02	.01	.26	.797
Self-esteem	.23	.03	.64	.525
Religiousness	-5.0	-2.2	-5.4**	.000

Adjusted  $R^2 = 0.05$ ,  $F = 10.047$ , \*\*  $p < .001$

A multiple linear regression presented in Table 2 was calculated to look at the influence of collectivism, self-esteem, and religiousness on the acceptance of cosmetic surgery. Among predictable variables, collectivism and self-esteem were revealed to be nonsignificant factors of the acceptance of cosmetic surgery. However, religiousness emerged as a significant predictor of the outcome variable which was the extent to which one accepts cosmetic surgery,  $b = -2.23$ ,  $t(561) = -5.4$ ,  $p < .001$ . A significant regression equation was found  $F(3,561) = 10.047$ ,  $p < .000$  with an  $R^2$  of .051. The result that religiousness significantly predicted the outcome variable indicates that those with lower levels of religiousness are more likely to accept cosmetic surgery than those with higher levels of religiousness.

### Discussion

The present study explored how collectivism, self-esteem, and religiousness, impacted the extent to which participants accepted cosmetic surgery. In order to find the relationships among the variables and examine predictive factors, both correlations and multiple regressions were calculated and analyzed. It was predicted that there would be a positive association between collectivism and individual acceptance of cosmetic surgery.

Also, there would be negative relationships between religiousness, self-esteem, and the acceptance of cosmetic surgery.

First, there was no correlation between collectivism representing interdependence and the acceptance of cosmetic surgery. The present study aimed to set collectivism as a means of assessing participants' interdependence. It was expected that the participants' levels of collectivism would be high since women typically like being interdependent and harmonious with other people (Cross & Madson, 1997; Gabriel & Gardner, 1999). However, the participants of the present study were recruited from the United States, which is usually categorized into an individualistic country. Despite women's higher tendency of interdependence, those from an individualist culture are apt to value independence and autonomy (Green et al., 2005; Hofstede 1984; Oyserman et al., 2002). It is plausible that the individualistic cultural influence hindered women's general tendency to be interdependent from being reflected in the collectivism scale. Thus, the differences in collectivism were small in magnitude, which produced no correlation with the acceptance of cosmetic surgery.

Furthermore, it was found in the study that self-esteem was not a significant factor in the acceptance of cosmetic surgery. This lack of correlation is consistent with a study done by Soest et al. (2006). However the result is contradictory to the findings in other research that found the negative association between one's self-esteem and one's view about cosmetic surgery (Furnham & Levitas, 2012; Kalantar-Hormozi et al., 2016; Swami, Campana, & et al., 2012; Swami et al., 2009).

Several potential reasons explain why the present study found no correlation between self-esteem and cosmetic surgery. Sarwer, Wadden, Pertschuk, and Whitaker (1998) conducted a study to examine the differences in self-esteem and body dissatisfaction between potential cosmetic surgery candidates and general study participants. They found out that people who wanted to undergo cosmetic surgery did not demonstrate any stark distinctions in their self-esteem levels, compared to those who had no desire to have cosmetic surgery. These study results imply that even for those who want to have cosmetic surgery, their self-esteem may not be an essentially determining factor that motivates them to engage in cosmetic surgery.

Another explanation is associated with overall higher levels of self-esteem of females in the United States when compared to those in Asian countries. Jung and Lee (2006) compared Korean participants to U.S. participants to explore their levels of self-esteem. These two authors showed that the U.S. female respondents were more likely to exhibit higher levels of self-esteem than those from Korea. Furthermore, Kowner (2002) also revealed that female participants from American samples tended to report higher scores of self-esteem in comparison with those from Japanese samples. Considering the fact that the majority of the participants were American in the current study, it is plausible that the participants' self-esteem levels showed overall high self-esteem levels, which potentially decreased any relationship with the likelihood of having cosmetic surgery.

Lastly, the finding consistent with one of the current study's hypotheses was a significantly negative correlation between religiousness and the acceptance of cosmetic

surgery. This result suggests that people with higher levels of religiousness are less likely to view cosmetic surgery positively compared to those with lower levels of religiousness. Moreover, the multiple regression model showed that religiousness was a key factor that predicted the acceptance of cosmetic surgery. The negative correlation between religiousness and cosmetic surgery corresponds with a previous study conducted by Furnham and Levitas (2012). The finding that higher religiousness was associated with a somewhat pessimistic view about cosmetic surgery might be explained by a study. The study suggested that people's religious beliefs function as their primary moral standards and often influence socially debatable issues (Geyer & Baumeister, 2005). Cosmetic surgery which is used to enhance one's appearance alters the way a person originally looked. This alteration is often considered as lying to and deceiving other people, and deception and dishonesty are usually opposed to moral values that many religious teachings pursue (Geyer & Baumeister, 2005; Prooijen & Lange (2016).

### **Limitations**

There are several limitations in the current study. This study used a convenience sampling by recruiting female participants from a Christian university in the southeastern United States, and they chose to decide whether or not to participate in the study. Thus, the respondents who took part in the study were more likely to be interested in the study topic than those who did not. The respondents who were conveniently gathered and willing to participate in the study because of their personal interest might not be representative of the whole population of female college students throughout the United States; thus, the results may not be generalizable to the general population. The present

study regards the difficulty of generalizing the study outcomes to the whole population as one of the limitations as well as a threat to external validity of the study.

Another limitation regarding internal validity is related to the research methods. The present study utilized a correlation and multiple regression analysis to examine how self-esteem, collectivism, and religiousness were associated with one's views or attitudes toward undergoing cosmetic surgery. However, data analyses based on the correlation and multiple regression analyses make it difficult to find the causal relationships between the variables. Moreover, it is hard to detect and control for extraneous factors that affect the relationships between the main variables. Confounding variables that are not manipulated in the study cause lower levels of internal validity for the current study.

### **Future Research Implications**

The present study encourages some changes to be made for future research that plans to investigate diverse variables that impact females' motivations to undergo cosmetic surgery. First and foremost, to compensate for the limitations of external and internal validity of this study, future researchers could have more participants to increase the possibility of generalizing their results to the entire population. Also, they could recruit respondents from many states of the United States, since this present study only gathered participants in a Christian school in the southeastern area. Moreover, to increase the internal validity, future study is encouraged to conduct an experimental study to know why people desire to undergo cosmetic surgery, instead of finding the correlations between predictable variables of influencing women to undergo cosmetic surgery.

To find the correlation between collectivism and cosmetic surgery, future study is encouraged to use a scale that can broadly measure one's collectivism levels. The present study measured the participants' collectivism that was regarded as representative of the degree of their interdependence. Yet, there might be some imitations of the tool used in the study. The collectivism scale might have failed to measure the collectivistic mindsets of the female participants who were in the United States, an individualistic country. Moreover, it is likely that the items of the collectivism scale seem to contain more of the positive aspects of interdependence than some negative attributes of interdependence, such as one's levels of sensitiveness or anxiety about other people's views and social standards. Therefore, future study might be able to find the correlation between collectivism and cosmetic surgery by using another more adequate scale to measure the extent to which a person is interdependent with other people.

Moreover, this study found no association between self-esteem and cosmetic surgery. No correlation between the two variables appears to be related to the sample of the American participants with overall high levels of self-esteem. Thus, in order to find the correlation, future study could attempt to gather respondents from a variety of ethnic groups. Further, researchers in the future might be able to see within-group and between-group differences by involving diverse ethnic groups.

The present study found the negative association between one's religiousness levels and cosmetic surgery and assumed that the relationship might result from religiousness that is strongly tied to one's morality. Yet, this study did not find why religiousness is related to the likelihood of having cosmetic surgery. Therefore, it is



encouraged that future research attempt to find the reasons why religiousness plays an important role in one's motivation of whether or not to have cosmetic surgery.

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