

# A Study on the Effects of Physical Appearance on Psychological Status and Cosmetic Surgery Preference: Differences by Generation

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Received February 25, 2023; Revised June 4, 2023; Accepted, June 28, 2023

## Abstract

Physical appearance is not only a factor that influences an individual's attractiveness, but it can also have an impact on one's psychological status. In order to determine the correlation between one's physical appearance and self-esteem, a survey on participants of different genders and various generations was conducted. The questionnaire consisted of a Rosenberg self-esteem scale (RSE) and 14 additional items related to respondents' self-perception, social perceptions towards appearance, personal experiences of cosmetic surgery, and viewpoints on cosmetic surgery. Correlation analysis showed that the responses of each section of the questionnaire indeed had a significant correlation, meaning that the respondent's physical attractiveness, self-esteem, and thoughts on plastic surgery were associated. Through gender-specific and age-specific analysis, the results of different participant groups were compared. Results indicated that generally, the older age group exhibited a weaker correlation between their appearance and self-esteem compared to the younger age groups. This phenomenon was discussed in detail and possible explanations for this phenomenon were presented. First, a tendency of older generations to prioritize values other than superficial standards was explained. When forming a self-perception, they were more likely to have standards such as social success and wealth rather than only physical attractiveness. Secondly, a possibility of the decline of cognition and perception caused by brain aging was suggested as a reason for the elderly to be less sensitive about their appearance compared to younger individuals.

*Keywords: Physical attractiveness, Self-esteem, Self-perception, Cosmetic surgery*

## 1. Introduction

Appearance is generally understood as a factor that influences the attractiveness of an individual. Physical appearance is closely related to attractiveness and therefore is associated with one's life and perceptions. Humans naturally tend to pursue physical attractiveness and admire those that coincide with their standards of beauty. Studies show that behavioral preference for beauty is inclined from our innate tendency towards beauty (Mo, et al., 2016). Therefore, the preference towards aesthetic objects should not be viewed as a phenomenon caused by environmental aspects; it can be more accurately explained as a natural consequence of human psychology and behavior. When one evaluates their own attractiveness, they tend to form a self-perception. Self-perception refers to an individual's view of one's own physical, mental attributes. Depending on the values one prioritizes, the standards in assessing their own value vary as well.

As there were aspects of the association between psychological factors and physical attractiveness, it seemed meaningful to analyze the relationship between one's psychological status and physical appearance. In addition, diverse viewpoints on cosmetic surgery and undergoing surgical procedures to change or improve one's appearance also seemed to be worth examining. It was hypothesized that respondents from older age groups would have higher self-esteem and be less sensitive toward physical appearance, resulting in less willingness to go through plastic surgery.

It is largely understood that physical attractiveness and self-esteem are closely correlated. It is observed that improving physical appearance improves someone's attitude and self-esteem, and therefore physical attractiveness can be viewed as a major factor that has a substantial influence on self-esteem (Patzner, 1997). Those who establish a more

positive self-image, are more likely to have a stable psychological state and therefore achieve higher confidence. Having a positive image of oneself leads to higher self-esteem and allows people to have mental clarity and form a more realistic viewpoint on their strengths and weaknesses. These factors all contribute to the success of an individual, meaning that having a positive self-image and high self-esteem is essential for success and achievement as well (Barclay, 2023). Studies on the self-perception of people from different genders and various age groups show that there is a difference between individuals in terms of how one perceives their own physical appearance. Age-specific studies determine how participants form a different self-image depending on their age. A cross-sectional study designed to observe the characteristics of adolescents' self-perceptions (Abdo, et al., 2023) concludes that the vast majority of participants from younger generations exhibited a negative self-perception of their physical appearance. Studies indicate that approximately half of adolescents experience low self-esteem (Hirsch and Dubois, 1991). Forming a negative self-image and having low self-esteem, especially at a young age, may lead to further psychological issues. Conversely, findings indicate that older generations tend to have higher self-esteem and self-efficacy compared to those who are younger (Dietz, 1996). This indicates that those who are older tend to form a more stable, confident psychological state.

The objective of this study is to investigate the differences between age groups in terms of the correlation between physical appearance and psychological status. Differences between generations are frequently discussed, and people thought that there might be a difference in the standards and viewpoints of people depending on age as well. We specifically focused on the aspect of one's viewpoints toward appearance, for discussion about the standards of beauty is always a controversial topic. It was thought that the beauty standards of generations would differ, and therefore, their assessments of their own appearance would differ as well.

In this report, we conducted a survey with participants of different genders and various age groups. The questionnaire was formed of 4 sections. Through the analysis of the responses, the correlation between the sections was observed. By making comparisons between the respondent groups, the correlation between one's appearance and self-esteem was determined. The age-specific analysis was especially studied in detail, and an explanation for the results was presented. We hypothesized that those in the older age group would exhibit a weaker correlation between their self-esteem and physical appearance compared to younger individuals.

## 2. Materials and Methods

This survey consisted of 24 questions regarding self-esteem, self-image and self-perception, and cosmetic surgery. The questionnaire was designed to enable an estimation of the participants' self-esteem and self-image to be made. In addition, personal opinions about plastic surgery were collected. Responses to each of the sections were collected in order to make a correlation analysis. Respondents were of different gender and various age groups.

### 2.1 Participants

The sample was formed by volunteer sampling. The questionnaire was sent by email to participants, and those who

Table 1. Demographic characteristics

Age	Women	Men	Total
10~19	83	47	130
20~29	47	27	74
30~39	24	5	29
40~49	15	11	26
Over 50	20	15	35
Total	189	105	294

volunteered to participate in the survey were selected as the sample group. The nationality of the participants is South Korean, and email recipients who voluntarily completed the survey were selected as the sample group.

### 2.2 Questionnaire

The questionnaire was intended to evaluate self-esteem, perception of one's own appearance, and opinions on going through surgical procedures to

modify one's appearance. Question 1~10 (section 1) is based on the Rosenberg self-esteem scale (RSE) (Rosenberg, 1965), a measure consisting of 10 items that were intended to diagnose the level of self-esteem of

respondents. Question 11~15 (section 2) is related to the participant’s self-perception of their own appearance. Question 16~20 (section 3) is related to the participant’s thoughts on social perceptions towards appearance, and question 21~24 (section 4) asks for personal opinions about cosmetic surgery. Answer choices are numbers 1 to 5, 1 meaning “strongly disagree,” 2 meaning “disagree,” 3 meaning “neutral,” 4 meaning “agree,” and 5 meaning “strongly agree.” Among the 24 questions, question 2, question 5, question 6, question 8, question 9, and question 15 were negative questions to check the consistency of respondents. In order to analyze the data more effectively, the responses to these negative questions were converted as 1 to 5, 2 to 4, 4 to 2, and 5 to 1. Responses to these questions were classified into each section for the efficiency of analysis. Questions on the survey are shown in Table 2.

Table 2. Questionnaire

1	Overall, I am satisfied with myself.
2	Sometimes, I think that I am good at nothing.
3	I think of myself as someone who has many strengths.
4	I can complete tasks as well as other people do.
5	I think that I have nothing to be proud of.
6	Sometimes, I view myself as useless.
7	I think that I am a valuable person.
8	I think that I do not have enough respect towards myself.
9	Overall, I think of myself as a failure.
10	I have an optimistic viewpoint toward myself.
11	I think that I have a decent appearance.
12	People around me often compliment my appearance.
13	I am satisfied with my appearance.
14	People say that my appearance is likeable.
15	I feel dissatisfied about my physical appearance.
16	The most influential thing among appearance, wealth, and education level is appearance.
17	I think that it is easier for someone who is physically attractive to achieve social success compared to someone who isn't.
18	I think that an attractive appearance is helpful in everyday life.
19	I think that including a photo of the applicant in a resume is better than not including one.
20	I think that it is unfair that viewpoints towards someone differ depending on his or her appearance.
21	I have gone through plastic surgery before.
22	I am willing to undergo plastic surgery in order to change my appearance.
23	I think that plastic surgery can help improve one's quality of life.
24	I have a positive viewpoint toward people who changed their physical appearance by plastic surgery.

### 2.3 Procedure and analysis methods

An email invitation with the survey link was sent to the participants on November 8, 2022. A total of 294 answers were collected by November 14, 2022. Statistical analysis, including estimating the mean, standard deviation, standard error, and correlation coefficient of the data, was performed. By evaluating the data on these questions, it was possible to estimate the correlation between each of the factors. The answers of the respondents were analyzed for a general analysis. In addition, gender-specific and age-specific comparisons were also made as well. The analysis of the results was confirmed by the Korea Policy Research Group.

IBM SPSS Statistics 23.0 was used for statistical analysis. The Pearson formula was used to calculate the correlation coefficients. For the age-specific analysis, the null hypothesis was that there is no difference in the mean values between different age groups. For the gender-specific analysis, the null hypothesis was that there is no difference in the mean values between different gender groups. A 95% confidence interval was used, and therefore, the p-value for the analysis was 0.05.

### 3. Results

The responses of all the participants were analyzed by each section of the questionnaire. Results are shown in Figure 1. Based on the analysis of section 1, it is observed that the questions with the highest average are “All in all,

I am not inclined to feel that I am a failure.” (4.27), “I feel I do have much to be proud of” (4.10), “I am able to do things as well as most other people” (4.09), “I feel that I'm a person of worth, at least on an equal plane with others” (4.06) had the highest average among the ten questions. In contrast, “I do not think I am no good at all at times” (3.44), “I wish I have enough respect for myself” (3.55), and “On the whole, I am satisfied with myself” (3.78) had the lowest average. The results of section 2, which are related to the self-image of

the participants, show that “I am satisfied with my appearance” (3.45), “People often compliment my appearance” (3.28), “I think of my appearance as attractive” (3.17) exhibited the highest average among the five questions. The results in section 3, which concern social perceptions about appearance, show that “Having an attractive appearance makes life easier” (4.28), “People who are good-looking are more likely to succeed than those who aren’t” (3.60) comparatively had the highest average among the five questions. The answers to the question of whether participants experienced plastic surgery before show that 58 participants (19.7%) had an experience undergoing cosmetic surgery whereas 236 participants (80.3%) never went through plastic surgery. Answers to section 4, exhibiting the participants’ opinions on cosmetic surgery, show that “I agree that plastic surgery can improve one’s life” (3.55) has the highest average among the three questions related to personal opinions on cosmetic surgery. For the question asking whether the respondent has experienced cosmetic surgery before (question 21), 58 people (19.7%) answered that they have gone through cosmetic surgery whereas 236 people (80.3%) answered that they haven’t.

Correlation analysis shows that there is a clear correlation between one’s self-esteem and self-image. In other words, participants who had a more positive self-image of themselves tended to exhibit higher self-esteem. A partial correlation between self-esteem and opinions toward cosmetic surgery is also confirmed. Those who had lower self-esteem showed a slight tendency to choose plastic surgery as a solution. Also, participants who answered that they perceived themselves as someone of less worth compared to others were inclined to feel that surgical procedures could help them strengthen their self-esteem.

#### 4. Discussion

##### 4.1 Age-specific analysis

Age-specific comparison in each section shows that generally, those who are older tend to have higher self-esteem, form a more positive self-image, and think of the importance of appearance less than those who are younger. In section 1, the question with the most drastic change in responses across different age groups was “Sometimes I feel useless.” In the following sections, the answers to the questions such as “People often compliment my appearance,” “Including a photo of the applicant in a resume is better than not including one,” and “I have a positive viewpoint towards people who have gone through plastic surgery,” showed the most rapid change according to age group, respectively. Conclusively, the results show that the answers of the participants in each section exhibit a significant difference between different age groups.

##### 4.2 Gender-specific analysis

Gender-specific analysis shows that generally, men tend to form a more positive self-image. In section 1, it is shown that men exhibit higher self-esteem compared to women. The average value of the responses of men was 3.92, whereas the average of the responses of women was 3.70. Also, as shown in section 2, male respondents showed a more positive perception of their own appearances. For the question that showed the largest difference between gender, “I think that I have a decent appearance,” the average response of male participants was 3.35, which is larger than 3.07, the average response of female participants. Through the comparison made between responses to section 4 of both genders, it can be concluded that female participants have a more positive viewpoint towards cosmetic surgery compared to male participants. Also, female participants were more inclined to go through surgical procedures than male participants and generally displayed a more affirmative attitude toward plastic surgery. To the question “I am

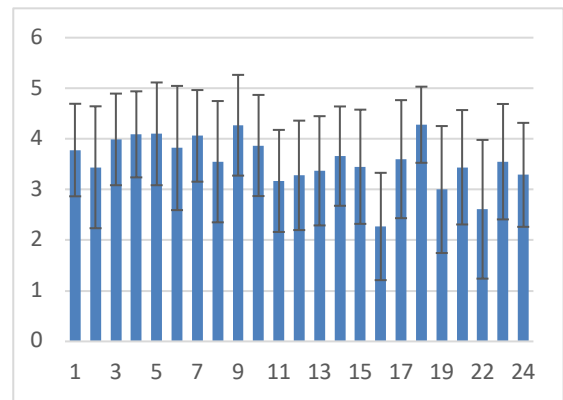


Figure 1. Analysis of answers to the questionnaire

considering undergoing plastic surgery in the future,” the average response of women was 2.88, which is larger than 2.11, the average response of men. Also, for the question “I have a positive viewpoint towards someone who has gone through surgical procedures to change or improve one’s appearance,” the mean value of the responses of female participants (3.43) was higher than that of male participants (3.05). Conclusively, results show that men generally form higher self-esteem and have a more positive self-perception about their appearance.

### 4.3 General Analysis

The hypothesis concerning differences between generations is generally supported by the results above. In the figures below, a larger response number indicates a more positive view of oneself, whereas a smaller response number signifies a comparatively negative view of oneself. However, results show an unexpected trend (Figure 2). The responses to section 2, which is related to the self-perception of the participants towards their own appearance, exhibit an increase from age group 10~19 to age group 20~29, and decline sharply in age group 30~39. Then, it shows an incline again through age groups 40~49 and those over 50. The age group of those between 20~29 years old exhibited a significantly positive self-image, whereas the age group 30~39 showed the lowest response average. This phenomenon suggests that those in the age group 20~29 tend to have a positive self-image and evaluate their appearance with a more

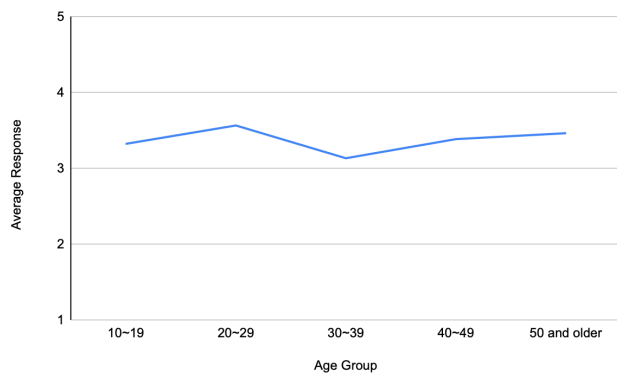


Figure 2. Trend of average responses to questions related to self-perception on appearance (section 2)

positive attitude compared to age groups 10~19 and 30~39. This may be explained that because people in age 20-29 are generally more physically attractive due to their youth, those in their twenties view their appearances positively. However, those in the age group 10~19 tend to show lower self-esteem and a more negative self-perception compared to those in other age groups. This suggests that teenagers are not yet psychologically mature and therefore are more sensitive about their appearance and tend to form a negative self-image of their physical appearance generally. The sharp decline in the age group 30~39 suggests that people in their thirties recognize that the aging process has begun and perceive themselves as not as beautiful compared to younger age groups.

However, for respondents in the age groups 40~49 and 50 and older, their self-perception appeared to get more positive again. This incline can be explained that as people age and become emotionally mature, they prioritize values such as social success, wealth, and respect over superficial standards such as physical attractiveness. Also, they tend to be less sensitive when viewing their own appearance, which leads to a more positive self-evaluation of their physical appearance. Within the same age group, female participants were more likely to exhibit a smaller average response, or a more negative self-perception.

Self-perception and self-image responses showed a strong correlation to the responses to section 4, the section asking respondents’ viewpoints toward plastic surgery. The trend of the average responses of each age group exhibits an ascent through age groups 10~19 and 20~29 to age group 30~39 and declines through age groups 40~49 and those over 50 (Figure 3). It is observed that those in their thirties were most likely to undergo cosmetic surgery in the future. Those in the age group 30~39 responded with the most positive attitude towards cosmetic surgery and were also willing to experience surgical procedures. In other words, the age group that showed the most negative

viewpoint towards cosmetic surgery was the age group 30~39. This may be explained that people in their thirties recognize that the aging process has begun and perceive themselves as not as beautiful compared to younger age groups.

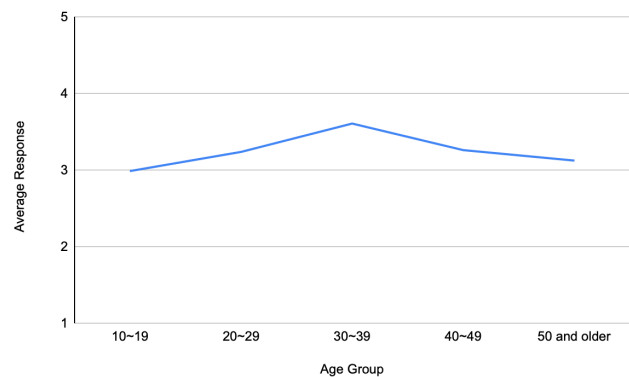


Figure 3. Trend of average responses to questions related to viewpoints on cosmetic surgery (section 4)



self-perception of their physical appearance was most inclined to go through plastic surgery. Those in the age groups 40–49 and 50 and older were less eager to change their appearance compared to the younger age groups. This can be explained that although those over 40 are generally less attractive than those in the age group 30–39 due to aging, the older generations are not as keen about their appearance and therefore are less enthusiastic about using plastic surgery to change or improve their physical attractiveness. Within the same age group, female participants were more likely to have a positive viewpoint on plastic surgery compared to male participants.

As reported, it can be concluded that the older age groups generally had a more positive perception of their appearance and found that the relation between appearance and psychological stability such as self-esteem was not as strong as the younger participants. This phenomenon can be interpreted in two ways. First, it could be explained that the older generations tend to prioritize values such as social status and wealth, other than appearance. Another explanation could be that people with older age tend to be loose in perception as the brain ages, leading to being less sensitive towards their physical appearance.

Values and standards that relate to one's self-esteem vary between generations. A study (Antonucci, et al., 1979) reports that those of various ages showed a significant difference in which values they prioritized the most, especially those that are work-related. Those from the oldest generation rated the values related to their social success and work higher than the youngest generation. This suggests that when evaluating one's self-image and self-esteem, the younger generations are more likely to think of appearance as an essential value. The older population regards other values such as success, ambition, and financial stability as well as physical attractiveness. However, younger generations who have a comparatively narrow perspective of life may depend solely on their appearance when estimating their own values. The differences between generations can be viewed as a result of psychological maturity. A study (Icenogle, et al., 2019) states that there is a difference between legal maturity and psychological maturity. This "maturity gap" is formed because whereas the adult level of cognitive capacity is reached around the age of 16, the adult level of psychosocial maturity can be reached after the age of 18. This demonstrates why those who are legally "adults" can still experience psychological problems related to maturity and confidence. Therefore, it is possible for those over the age of 18 to vary in levels of psychological and emotional maturity. Psychological maturity is a term used to describe the level of emotional and psychological development of an individual. It is a broad concept that encompasses a wide range of traits, including self-awareness, self-regulation, empathy, and emotional intelligence. Maturity and self-esteem are both complex and multi-faceted concepts that are closely related. There is a strong correlation between maturity and self-esteem, as maturity can greatly influence self-esteem. As individuals mature and develop, they develop a more positive self-image and self-concept and tend to have a more positive sense of self-worth. Additionally, as individuals mature, they are better able to handle challenges and setbacks. It becomes easier to be resilient and cope with difficult situations as they develop a better understanding of their own strengths and weaknesses and can use that understanding to make positive changes in their lives. All the factors contribute to higher self-esteem, indicating that individuals who are more mature are likely to have better psychological stability. Similarly, immaturity can lead to lower levels of self-esteem. Immature individuals may have a negative self-image and self-concept, and may doubt themselves and their abilities, leading to lower levels of self-esteem. Although maturity levels may vary even in the same generation, it is widely accepted that those of an older age are more likely to develop higher levels of psychological and emotional maturity. A contributing factor to the lower psychological stability of young generations can be viewed as a result of social media usage. Those of the younger generation tend to be exposed to social media more actively than the older generation. A study assessing the association between social media usage and self-esteem (Valkenburg, et al., 2021) reported a significant negative relationship between social media usage and self-esteem of adolescents was examined, meaning that participants who spent more time on social media were inclined to exhibit lower levels of self-esteem. This provides an explanation for younger participants to show lower levels of self-esteem and be more sensitive to how self-images are perceived by others than the older participants.

Another contributing factor to this phenomenon is the impact that the aging of the brain has on cognition and perception. It is shown that there is a significant interrelation between perception and cognition, meaning that poor cognition can cause perception skills to deteriorate as well (Roberts and Allen, 2016). Perceptual decline may not only cause difficulties in mastering perceptual tasks, but it may also result in impoverished sensitivity in the process of perception. In addition, as well as cognitive and perceptual decline, the sensitivity to objects also is shown to worsen. Sensory impairment includes a decline in visual and auditory acuity. A deficit in cognition, perception, and sensory

acuity may affect how one perceives their own physical appearance and form a mental image of their looks. Those who are younger tend to be keener about the flaws they spot in their physical selves, causing them to establish comparatively less confident self-images. According to a study on adolescents' self-esteem (Harter and Whitesell, 2001), adolescents are more self-observant and self-reflective, meaning that they pay more attention to themselves and their physical image than older people do. They tend to apply more strict and idealistic standards on themselves. Conversely, those from older generations become less sensitive in terms of viewing and analyzing their physical appearance. This may lead to a more positive perception of oneself since one becomes more insensitive about the subtle aspects, including minor flaws, of their physical body.

## 5. Conclusion

An individual's physical appearance has been found to impact both self-esteem and one's willingness to go through cosmetic surgery. Generally, those with lower self-esteem tend to form a more negative self-image and are more likely to take the risk of doing plastic surgery. Results show that this degree of correlation differs between various participant groups. Our age-specific analysis shows that respondents of the older age groups exhibited a weaker degree compared to those of the younger age groups and explanations for this phenomenon were suggested. Deteriorated cognition as a result of brain aging and emotional maturity were presented as possible explanations. Conclusively, it can be suggested that those of younger age should make an effort to form a positive self-perception for their mental health.

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