

## Effect of Plastic Surgery Perception and Interest on Appearance Maintenance Behavior and Self-esteem

Sang-Hee Lee<sup>1</sup> and Yong-Mi Jin<sup>2,\*</sup>

<sup>1</sup>Graduate Student, Dept. of Beauty Arts, Graduate School, Seokyeong University  
<sup>2</sup>Professor, Dept. of Hair-Makeup Design, College of Beauty Arts, Seokyeong University

### 미용성형인식 및 관심도가 외모관리행동과 자아존중감에 미치는 영향

이상희<sup>1</sup> · 진용미<sup>2,\*</sup>

<sup>1</sup>서경대학교 일반대학원 미용예술학과, 대학원생  
<sup>2</sup>서경대학교 미용예술대학 헤어메이크업디자인학과, 교수

SPSS 21.0 program was used to analyze data collected from total of 319 surveys on the effect of plastic surgery perception and interest in appearance on appearance orientation and self-esteem. This research aims to identify the impact of plastic surgery perception and interest in appearance on appearance orientation in order to encourage appearance orientation and enhance self-esteem, and the results were the following. Positive factor of plastic surgery perception had negative(-) effect on orientation factor of appearance orientation, and reaction and improvement factors had positive(+) effect on orientation factor. Also, positive factor of plastic surgery perception has negative(-) effect on self-esteem while improvement factor had positive(+) effect. interest in appearance factor had positive(+) effect on orientation factor of appearance orientation and on self-esteem factor as well. In conclusion, plastic surgery perception can be improved through app review events while 3D virtual surgery and service systems such as happy-call for after service maintenance can increase self-esteem. Methods for increasing interest in appearance include regular exercises and self-makeup classes. Future research could connect plastic surgery perception and interest in appearance with behavior and psychological characteristics to find meaningful connections.

**Keywords:** Appearance orientation, Interest in appearance, Plastic surgery perception, Self-esteem

### I. Introduction

Rapid modernization and increasing quality of life encourage women to become a much more active participants in society and improved medical technologies caused increased desire for health and beauty among women. Such increased demand for medical procedures go hand in hand with increased interest and demand for plastic surgery. Medical advancements and availability of plastic surgery for general public play their part in expanding plastic surgery activities and appearance orientations. Various plastic surgery researches and interests in modern society produced research outcomes that play

crucial role also in Korea's medical beauty procedures market, hence further promoting the need for research on attitude and behavior intention about plastic surgeries. According to You(2018)'s research on interest and maintenance behavior on appearance depending on prior experience of plastic surgeries indicated people with prior plastic surgery experience were more interested in appearance and showed higher appearance orientation, and such interest and behaviors further demonstrated more interest and positive perception of plastic surgeries. Also, according to research by Lee(2018), interest in appearance was higher among women in their twenties, which suggested then younger women tend to think of good looks as competitive advantage and a form of competence. In Lee(2020)'s research, dissatisfaction with appearance led to psychological problems such as feeling of inferiority and depression, which could lead to serious

\*Corresponding author: Yong-Mi Jin  
Tel : +82-2-940-7813  
E-mail : 65621107jin@hanmail.net  
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individual self-esteem issues such as self-denial, helplessness and self-depreciation. As such, women are becoming more interested in beauty and are willing to actively express such desire(Huh, 2010). For professional women, appearance is a tool for self-expression which also produces positive impact in interpersonal relationships while increasing sense of satisfaction with oneself, which allow women to be assertive and effective in carrying out tasks, thus making it a resource for gaining competitive edge in society(Kim, 2009). Therefore, this research aims to identify effects of plastic surgery perception and interest on appearance orientation and self-esteem in order to encourage appearance orientation and increase self-esteem.

## **II. Theoretical Background**

### **1. Plastic Surgery Perception**

Plastic surgery perception is a psychological state which recognizes all plastic surgeries at cosmetic hospitals as not just a means for satisfying psychological desire for beautiful physical appearance but also a way of minimizing internal affliction about one's looks to pursue and enjoy a better life for oneself(Han & Park, 2008). Research by Hwang et al. (2017) indicated that college students in Korea increasingly thought of appearance as important and had lower aversion towards plastic surgery, thus indicating a positive shift of plastic surgery perception and appearance orientation was seen as an essential tool for social success and self-actualization that can influence various aspects of society such as living day to day lives, job prospects and more. Therefore, this research will take into consideration such previous findings and regard appearance orientation as an integral tool for social success and self-actualization to pursue and enjoy a better lifestyle and as a factor which affects various aspects of society.

### **2. Interest in Appearance**

Interest in appearance can be defined as the degree of prolonged interest in physical enhancements such as clothes, makeup, accessories, etc. for increasing attractiveness of one's appearance(Chung, 2003). Efforts to work on appearance can be a starting point for freshly assessing and improving oneself and it could also work as a quick visual way to communicate

one's identity to others, and beauty standards of the times can have impact on personal lives as well as society's overall objective perception of appearance(Kim, 2014). Hence, interest in appearance is a necessary tool for expressing oneself in different societies, and appearance is an important factor in forming first impression before interpersonal interactions (Yoon, 2007; Kim, 2011). Therefore, this research took such previous research into consideration and selected Yoon(2007)'s research data to see interest in appearance as a form of self-expression in order to identify impact of interest in appearance on appearance orientation and self-esteem.

### **3. Appearance Orientation**

Appearance plays important role on interpersonal relationships and in forming first impressions. Unlike the past where more emphasis was put on abilities when it came to assessing others, in current times there is a perception that attractive appearance can bring social success, thus making people willingly invest in their looks(Hong, 2013). Therefore, appearance orientation is a powerful tool for satisfying one's desire for beauty and expressing one's identity and emotions by presenting one's desired appearance to others in everyday life.

Research by Lim et al.(2018) defined appearance orientation as an adorning behavior to express desired image of oneself to others and it's a way of expressing oneself and one's identity. Various beauty related maintenances such as utilizing clothes, makeup and accessories as well as nails, hairs and body maintenance are also forms of appearance maintenance behavior(Lee & Jang, 2013). In addition, in order to escape one's physical shortcomings and a sense of inferiority about one's appearance in the rapidly changing beauty standards of society, people continue to engage in appearance orientation(Kaiser, 1990; Kim, 2008).

Therefore, this research takes previous researches into account to consider getting nails, hair and body procedures as a form of appearance orientation to study the impact of plastic surgery perception and interest in appearance on appearance orientation.

### **4. Self-Esteem**

The concept of self-esteem was first introduced by American psychologist William James(1890), and it can be defined as a

self-assessment of one's own attitude about oneself, and it's determined by personal values based on one's ability, value, success, importance etc. that can be a proportional indicator of one's measure of accomplishments(Kim, 2009). Such self-esteem can be formed, changed and developed throughout one's lifespan but some researches indicate that for some people in certain environments, some periods can have negative impact on one's self-esteem(Lee, 2005). Hence, self-esteem means one's own positive or negative assessment of oneself(Choi, 2016).

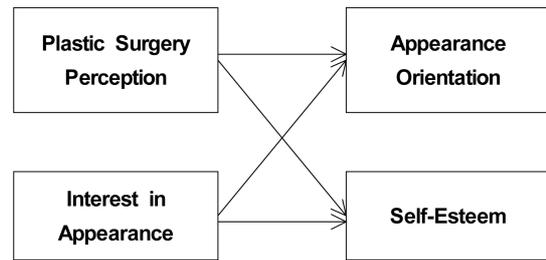
Therefore, this research will consider previous researches to identify self-esteem as a positive or negative assessment of oneself as part of one's personal value system in order to observe effects of plastic surgery perception and interest in appearance on self-esteem.

### III. Contents and Methods

#### 1. Research Tasks and Model

<Fig. 1> is the research model, the research questions according to the purpose of this study are as follows.

First, general properties of research subjects will be analyzed. Second, lower dimension factors of plastic surgery perception, interest in appearance, appearance orientation and



**Figure 1.** The relationship between cosmetic plastic surgery awareness and interest on appearance management behavior and self-esteem

self-esteem will be extracted. Third, effect of general properties on plastic surgery perception, interest in appearance, appearance orientation and self-esteem will be analyzed. Fourth, effect of plastic surgery perception on appearance orientation will be analyzed. Fifth, effect of plastic surgery perception on self-esteem will be analyzed. Sixth, effect of interest in appearance on appearance orientation will be analyzed. Seventh, effect of interest in appearance on self-esteem will be analyzed.

#### 2. Research Subject and Data Collection

For the purpose of this research, self reported surveys were conducted on people living in Seoul and Gyeonggi province. 50 surveys were collected for preliminary research from March 1<sup>st</sup> 2021 until April 1<sup>st</sup> 2021 and survey questions were

**Table 1.** Composition of Questionnaire

Survey item	Content	Number of Questions	Scale	Sources
Characteristics	Gender, age, education level, marriage status, monthly income, occupation, a source that influences your appearance, skin, makeup, and body care, the number of times invested in plastic surgery for your appearance, number of visits to plastic surgery clinics	9	Name.	Researcher.
Plastic surgery perception	Need for cosmetic plastic surgery, changes in appearance, can fill the deficiencies of body parts, personality changes through cosmetic plastic surgery, important factors of success, thinking about plastic surgery with friends, thinking about cosmetic purposes, advertising, brightening, and self-anxiety.	20	The barn.	Oh(2010), Kim(2017), Lee(2007), Revised and supplemented.
Interest in appearance	I'm satisfied with my face, I'm interested in media, I like to decorate my usual appearance, I think time to care about me, I care about how I look to others, I always care about how I look before going out, I think it's important to look cool to others.	10	The barn.	Jeong(2009), Boo(2012), Revised and supplemented.
Appearance orientation	I like how I look in the mirror, my friends like my appearance, other people's appearance is much better, I want to be thinner, I want to change a lot of parts of my appearance, I think my height is appropriate, I'm worried about how I look, I want to be prettier.	10	The barn.	Jeong(2009), Boo(2012), Revised and supplemented.
Self-esteem	I think I'm a valuable person like others, I think I have a lot of good character, I generally think I'm a failed person, I have nothing to brag about, I'm as good as most people, I'm satisfied with myself, I wish I could respect myself more, sometimes I think I'm a useless person	10	The barn.	Jeong(2009), Boo(2012), Revised and supplemented.
Total questions.			51	

edited for enhanced clarity of sentence structures and questions. Total of 372 surveys were collected for main research from April 2<sup>nd</sup> 2021 until June 21<sup>st</sup> 2021, and 41 substandard surveys were removed then total of 319 surveys were used as final research data.

### 3. Survey Construction

Survey questions used as measuring tool for this research are shown in <Table 1>. Survey question prompts used as measuring tools consist of 58 questions on general characteristics, plastic surgery perception, interest in appearance, appearance orientation and self-esteem. All the Likert scales used for this research range from '1: not true at all' to '5: very true' on 5-points Likert scale.

### 4. Data Processing

Collected data was put through SPSS 21.0 program to analyze the following.

First, frequency analysis was conducted for the general characteristics of research subjects. Second, factor analysis and reliability analysis were conducted for lower dimension factors of plastic surgery perception, interest in appearance, appearance orientation and self-esteem. Third, t-test and ANOVA analysis were conducted to determine the impact of general properties on plastic surgery perception, interest in appearance, appearance orientation and self-esteem. Forth, multiple regression analysis was conducted for effects of plastic surgery perception on appearance orientation. Fifth, multiple regression analysis was conducted for effects of plastic surgery perception on self-esteem. multiple regression analysis was conducted for effects of interest on appearance orientation. Seventh, multiple regression analysis was conducted for effects of interest in appearance on self-esteem. Principal component analysis was used for factors extraction and Varimax was used for factor rotation. Cronbach's  $\alpha$  value was used for reliability analysis for the variables.

## IV. Results and Considerations

### 1. General properties of research subjects

Results of frequency analysis for general properties of research subjects is on <Table 2>.

**Table 2.** General Properties

(N=250)			
	Category	Frequency (N)	Percentage (%)
Gender	Man	108	33.9
	Woman	211	66.1
Age	10s	36	11.3
	20s	188	58.9
	30s	53	16.6
	40s	5	1.6
	Over 50s	37	11.6
Education level	Below high school	71	22.3
	Associate degree enrolled/ graduated	78	24.5
	College enrolled/graduated	145	45.5
	Above grad school	25	7.8
Marriage status	Single	269	84.3
	Married	46	14.4
	Other (divorced, bereaved, separated, etc.)	4	1.3
Monthly income	Less than 1 million won	120	37.6
	Less than 1-2 million won	67	21.0
	Less than 2-3 million won	59	18.5
	Less than 3-4 million won	21	6.6
	Less than 4-5 million won	6	1.9
	More than 5 million won	46	14.4
Occupation	Student	127	39.8
	Office worker	110	34.5
	Government worker	3	9
	Businessman	59	18.5
	Unemployed	20	6.3
A source that influences your appearance, skin, makeup, and body care	Mother	21	6.6
	Older sister	22	6.9
	Cosmetics salesperson	6	1.9
	Television	10	3.1
	Computer	57	17.9
	Fashion magazines and catalogues	23	7.2
	Teacher	2	.6
	Friend	106	33.2
The number of times invested in plastic surgery for your appearance	etc.	72	22.6
	Never	214	67.1
	Once	85	26.6
	Twice	18	5.6
Number of visits to plastic surgery clinics	More than twice	2	.6
	Never	224	70.2
	Once	88	27.6
Total	More than twice	7	2.2
		319	100.0

Genders were 66.1% female and 33.9% male. For ages, 58.9% were in 20s, 16.6% were in 30s, 11.6% were in 50s, 11.3% were in their teens, and 1.6% were in 40s, in that order. Level of educations consisted of 45.5% college enrolled/graduated, 24.5% associates degree enrolled/graduated, 22.3% below high school and 7.8% above grad school. Marriage status ranged from 84.3% single, 14.4% married and 1.3% other (divorced, bereaved, separated, etc.). Monthly income ranged from 37.6% earning less than 1 million won, 21.0% earning less than 1-2 million won, 18.5% earning less than 2-3 million won, 14.4% earning more than 5 million won, 6.6% earning less than 3-4 million won and 1.9% earning less than 4-5 million won. Professions ranged from 39.8% students, 34.5% office workers, 18.5% businessmen, 6.3% unemployed to 0.9% government workers. The sources of information that influence one's appearance, skin, makeup and body ranged from 33.2% friends, 22.6% other, 17.9% computer, 7.2% fashion magazine and catalogue, 6.9% older sister, 6.6% mother, 3.1% television, 1.9% cosmetic salesperson to 0.6% teacher. Number of times invested in plastic surgery for appearance ranged from 67.1% never, 26.6% once, 5.6% twice to 0.6% more than three times. Visits to plastic surgery clinics ranged from 70.2% never, 27.6% once to 2.2% more than twice.

## 2. Lower dimension factors of plastic surgery perception, interest in appearance, appearance orientation, self-esteem

To measure plastic surgery perception, interest in appearance, appearance orientation and self-esteem, prior to performing factor analysis on 20, 10, 10 and 9 survey questionnaire, previously measured data was assessed to see if it meets the assumption of factor analysis. Bartlett Sphericity indicated that  $\chi^2$  is each 1129.107(df=28, Sig.=0.000), 444.557(df=6, Sig.=0.000), 75.822(df=3, Sig.=0.000) and 166.145(df=1, Sig.=0.000), thus confirming there's sufficient relationship among variables to form factors. KMO sample suitability indicated 0.635, 0.709, 0.609 and 0.500 each, and commonalities were over 0.554, 0.712, 0.481, and 0.717 each, which meant it's possible to perform factor analysis.

### 1) Lower dimension factors of plastic surgery perception

Performing factor analysis produced three lower dimension factors as shown in Table 3, and 12 questions that didn't fit the meaning among other attributes were removed. Overall explanation power of lower dimension factors appeared as 77.4%, and based on the questionnaire, 'lower dimension factor 1(31.3%)' was named as 'positive', 'lower dimension factor 2(23.5%)' was named 'reaction' and 'lower dimension factor 3(22.5%)' was named 'improvement'

### 2) Lower dimension factors of interest in appearance

Performing factor analysis produced single lower dimension factor as shown in Table 4, and 6 questions that didn't match the meaning with other attributes of the variable were removed. Overall explanation power of the dimension was

**Table 3.** Plastic surgery perception factors analysis

Measurement questions for cosmetic plastic surgery recognition.	Positive	Reaction	Improvement	Commonality
Cosmetic plastic surgery is one of the self-management methods to increase competitiveness.	.836	-.056	.049	.704
Cosmetic plastic surgery is an important factor in success.	.814	.236	.008	.719
I think cosmetic surgery brightens people.	.814	-.002	.040	.664
If your opposite sex friend is undergoing cosmetic plastic surgery, I would highly recommend it.	.657	.270	.224	.554
I think I'll be satisfied with the results after undergoing cosmetic plastic surgery.	.037	.947	.088	.907
If I undergo cosmetic plastic surgery, I think people around me will respond positively.	.184	.923	-.036	.886
Cosmetic plastic surgery helps change appearance.	.117	.005	.935	.889
Cosmetic plastic surgery can fill in body parts or shortcomings that you don't like.	.057	.049	.931	.872
Unique value	2.507	1.883	1.804	
Description variance (%)	31.335	23.533	22.551	
Accumulated variance (%)	31.335	54.868	77.419	
Reliability factor Cronbach's $\alpha$	0.804	0.879	0.870	

**Table 4.** Interest in appearance factor analysis

Interest in appearance measurement question	Interest in appearance	Commonality
I tend to care about how I look to others.	.871	.759
I think image making that suits me is important.	.830	.688
I tend to pay more attention to my appearance when I have class.	.750	.563
I am happy with the time I spend taking care of myself.	.712	.507
Unique value.	2.518	
Description variance (%)	62.939	
Accumulated variance (%)	62.939	
Reliability factor Cronbach's $\alpha$	0.789	

**Table 5.** Appearance orientation factor analysis

Measurement questions for appearance orientation	Appearance orientation	Commonality
I wish I could be prettier.	.778	.605
I wish I were slimmer.	.705	.497
There are many parts of my appearance that I want to change.	6.93	.481
Unique value.	1.583	
Description variance (%)	52.774	
Accumulated variance (%)	52.774	
Reliability factor Cronbach's $\alpha$	0.540	

62.9% and based on questions consisting the variable, 'lower dimension factor 1(62.9%)' was named 'interest in appearance'.

### 3) Lower dimension factors of appearance orientation

Performing factor analysis produced single low dimension factor as shown in Table 5, and 7 questions that didn't match meaning with other attributes of the variable were removed. Overall explanation power of lower dimension factor was 52.7%, then based on questionnaire that make up the factor, 'low dimension factor 1' was named 'appearance orientation'.

### 4) Lower dimension factors of self-esteem

Performing factor analysis produced single factor as shown in Table 6, and 8 questions that didn't match meaning with other attributes in the variable were removed. Overall explanation power of the dimension was 71.7%, and based on questions making up the variable, 'lower dimension factor 1(71.7%)' was named 'self-esteem'.

**Table 6.** Factor analysis of self-esteem

Self-esteem measurement question	Self-esteem	Commonality
I think I'm at least a valuable person to the same extent as others.	.847	.717
I think I have a lot of good characteristics.	.847	.717
Unique value.	1.434	
Description variance (%)	71.714	
Accumulated variance (%)	71.714	
Reliability factor Cronbach's $\alpha$	0.598	

## 3. Effect of demographic characteristics on plastic surgery perception, interest in appearance, appearance orientation and self-esteem

In order to determine the different effects of demographic characteristics on plastic surgery perception, interest in appearance, appearance orientation and self-esteem, t-test, ANOVA analysis as well as scheffe-test produced following results.

### 1) Effect of demographic characteristics on plastic surgery perception

Results of analysis are in Table 7, and women showed higher reaction and improvement than men. Ages over 40s showed higher improvement factor than people in their 10s, 20s, 30s and 50s. People with monthly income of less than 3-4 million won had higher positive factor while those with less than 1 million won had the lowest Observing the distribution outcome of effect of demographic characteristics on plastic surgery perception, as women have historically demonstrated continued interest in beauty and such pursuit of beauty by modern women living in appearance oriented society have led to increased investment of time and money in chasing the goal of clean skin and shapely bodies(Lee, 2015), it probably resulted in more women showing higher reaction and improvement factors than men. Also, since elderly women engage in plastic surgery to delay the aging of their skin while women in their 30s are interested in appearance due to their need to participate in social activities and forming relationships with other people, it seems like women show increased interest in appearance and engage in plastic surgery to alleviate appearance of wrinkles and delay the signs of aging skin.

**Table 7.** Effect of demographic characteristics on plastic surgery perception

	Characteristics	Plastic surgery perception factors	M	S.D	F(t)
Gender	Men	Positive	0.06	0.98	0.816
	Women		-0.03	1.01	
	Men	Reaction	-0.05	1.09	
	Women		0.03	0.95	
	Men	Improvement	-0.08	1.03	
	Women		0.04	0.99	
Age	10s	Positive	-0.07	1.05	1.420
	20s		-0.06	0.97	
	30s		0.00	0.95	
	40s		0.58	0.67	
	Over 50s		0.29	1.16	
	10s	Reaction	-0.23	1.17	0.771
	20s		0.04	0.97	
	30s		-0.07	1.14	
	40s		0.29	0.42	
	Over 50s		0.06	0.79	
	10s	Improvement	-0.17B	1.12	4.992 **
	20s		0.15AB	0.86	
	30s		-0.21B	1.02	
	40s		1.00A	0.67	
	Over 50s		-0.42B	1.31	
Education level	Below high school	Positive	0.00	1.08	0.546
	Associate degree enrolled/graduated		0.12	1.15	
	College enrolled/graduated		-0.06	0.86	
	Above grad school		0.00	1.02	
	Below high school	Reaction	-0.07	1.09	0.619
	Associate degree enrolled/graduated		0.02	1.02	
	College enrolled/graduated		0.06	0.91	
	Above grad school		-0.20	1.18	
	Below high school	Improvement	-0.12	1.04	1.442
	Associate degree enrolled/graduated		-0.06	1.09	
	College enrolled/graduated		0.12	0.93	
	Above grad school		-0.19	0.97	
Marriage status	Single	Positive	-0.04	0.98	1.625
	Married		0.18	1.09	
	Other (divorced, bereaved, separated, etc.)		0.58	0.91	
	Single	Reaction	0.00	1.03	0.454
	Married		-0.05	0.82	
	Other (divorced, bereaved, separated, etc.)		0.45	0.86	
	Single	Improvement	0.04	0.92	1.642
	Married		-0.25	1.35	
	Other (divorced, bereaved, separated, etc.)		0.03	1.27	

**Table 7.** Continued

Characteristics		Plastic surgery perception factors	M	S.D	F(t)
Monthly income	Less than 1 million won	Positive	-0.23	0.91	3.783 **
	Less than 1-2 million won		-0.06	1.09	
	Less than 2-3 million won		0.12	1.05	
	Less than 3-4 million won		0.63	0.99	
	Less than 4-5 million won		0.39	0.52	
	More than 5 million won		0.19	0.91	
	Less than 1 million won	Reaction	0.07	0.87	0.463
	Less than 1-2 million won		-0.11	1.15	
	Less than 2-3 million won		-0.06	0.97	
	Less than 3-4 million won		-0.10	1.20	
	Less than 4-5 million won		0.24	0.54	
	More than 5 million won		0.07	1.09	
	Less than 1 million won	Improvement	0.12	0.89	2.093
	Less than 1-2 million won		-0.21	0.96	
	Less than 2-3 million won		-0.08	1.11	
	Less than 3-4 million won		0.42	0.82	
	Less than 4-5 million won		0.26	1.18	
	More than 5 million won		-0.14	1.16	

\*\* $p < 0.01$ , \*\*\* $p < 0.001$  Scheffé-test : A>B

**2) Effect of demographic characteristics on interest in appearance**

Results of analysis are in Table 8, and women showed higher interest in appearance than men. Those with education level of college enrolled/graduated showed higher interest in appearance than those with associate degree enrolled/graduated and above grad school education levels. Those with monthly income of less than 1 million won a month had highest interest in appearance while those with less than 3-4 million won monthly income had lowest interest in appearance. Observing the distribution outcome of effect of demographic characteristics on interest in appearance, it's probably that intense interest in appearance in society as a whole increases interest in beautiful appearance by the individuals seeking to enhance their external images. In research by Kim(2020), people in their 20s were most likely to start getting facial shape enhancing procedures and research by Lee(2005) showed most women showed interested in and started getting skincare procedures, thus partially supporting the data outcomes of this research.

**3) Effect of demographic characteristics on appearance orientation**

Results of analysis are in Table 9, and women showed higher appearance orientation than men. People in their 20s showed highest appearance orientation while those in their 30s showed the lowest. For education level, those who were college enrolled/graduated showed highest appearance orientation while those with above grad school education level had the lowest outcome. For monthly income, those earning less than 1 million won showed highest appearance orientation while those earning less than 2-3 million won had the lowest outcome. Observing the distribution outcome of effect of demographic characteristics on appearance orientation is yet another example of the generally accepted knowledge that first impressions have bigger impact than personality or character when assessing others. In research by Na(2015), ages, marital status, number of children, average income and jobs demonstrated statistically significant differences and those in their 20s and 30s than higher appearance orientation tendency than those in their 40s and 50s, while unmarried people had higher appearance orientation than married people, thus partially supporting the results of this research.

**4) Effect of demographic characteristics on self-esteem**

Results of analysis are in Table 10, and women showed

**Table 8.** Effects of demographic characteristics on interest in appearance

Characteristics		Interest in appearance factors	M	S.D	F(t)
Gender	Men	Interest in appearance	-0.20	1.00	-2.547 *
	Women		0.10	0.99	
Age	10s	Interest in appearance	-0.03	1.06	2.118
	20s		0.11	0.95	
	30s		-0.21	1.12	
	40s		0.36	1.04	
	Over 50s		-0.28	0.94	
Education level	Below high school	Interest in appearance	0.06AB	1.10	8.458 *
	Associate degree enrolled/graduated		-0.40B	0.86	
	College enrolled/graduated		0.24A	0.91	
	Above grad school		-0.31B	1.18	
Marriage status	Single	Interest in appearance	0.04	1.01	1.384
	Married		-0.19	0.94	
	Other (divorced, bereaved, separated, etc.)		-0.41	0.50	
Monthly income	Less than 1 million won	Interest in appearance	0.37	0.90	7.639 ***
	Less than 1-2 million won		-0.42	0.92	
	Less than 2-3 million won		-0.10	0.99	
	Less than 3-4 million won		-0.44	1.13	
	Less than 4-5 million won		0.09	1.43	
	More than 5 million won		-0.04	0.93	

\* $p < 0.05$ , \*\*\* $p < 0.001$  Scheffé-test : A>B

higher self-esteem than men. People in 40s showed highest self-esteem while those in their 50s showed the lowest. For education level, people with above grad school education showed highest self-esteem while those with associate degree enrolled/graduated education showed lowest self-esteem. Those with monthly income of less than 4-5 million won showed highest self-esteem while those earning less than 3-4 million won had the lowest self-esteem. Observing the distribution outcome of effect of demographic characteristics on self-esteem indicates those with higher social status tend to have higher self-esteem and in research by Joo(2015), differences in self-efficacy based on ages showed statistically significant impacts on confidence, self-control efficacy and self-efficacy, with those in their 50s showing highest level of confidence while those in their 40s showing self-control efficacy and self-efficacy, thus partially supporting the results of this research.

#### 4. Effects of plastic surgery perception on appearance orientation

Looking at multicollinearity of plastic surgery perception and appearance orientation prior to performing multiple regression analysis, VIF values were all under 10, making it reasonable to perform multiple regression analysis and the results are shown in <Table 11>.

First, orientation factor was approximately 9.8% explained by positive, reaction and improvement factors. Furthermore, higher preference for reaction and improvement factors increased appearance orientation factor by 0.239, 0.183 times each, thus indicating positive effect, while higher preference for positive factor decreased appearance orientation factor by -0.125 times, thus indicating a negative effect. Therefore, viewing plastic surgery as a competitive self-management method, essential element for success, having positive impact and being aware of positives about plastic surgery will probably decrease orientation while not having impact on satisfaction. Being satisfied after plastic surgery and recognizing positive reaction of other people, enhanced appearance and improved physical flaws will increase orientation factor while not having impact on satisfaction factor.

Han & Park(2008)'s Study of Appearance Maintenance

**Table 9.** Effect of demographic characteristics on appearance orientation

Characteristics		Appearance Orientation Factors	M	S.D	F(t)
Gender	Men	Appearance Orientation	-0.37	0.86	-5.179***
	Women		0.19	1.01	
Age	10s	Appearance Orientation	-0.13	0.95	5.684***
	20s		0.20	1.07	
	30s		-0.46	0.79	
	40s		0.14	0.79	
	Over 50s		-0.25	0.68	
	Below high school		-0.11	0.94	
Education level	Associate degree enrolled/ graduated	Appearance Orientation	-0.19	0.73	3.662*
	College enrolled/ graduated		0.20	1.12	
	Above grad school		-0.24	0.96	
	Single		0.05	1.04	
Marriage Status	Married	Appearance Orientation	-0.27	0.70	2.076
	Other (divorced, bereaved, separated, etc.)		-0.15	0.51	
	Less than 1 million won		0.47	1.12	
Monthly Income	Less than 1-2 million won	Appearance Orientation	-0.28	0.86	10.866***
	Less than 2-3 million won		-0.42	0.74	
	Less than 3-4 million won		0.07	0.55	
	Less than 4-5 million won		-0.17	0.96	
	More than 5 million won		-0.30	0.80	

\* $p < 0.05$ , \*\*\* $p < 0.001$  Scheffé-test : A>B

Behavior about Makeup and Plastic Surgery indicated that interest in plastic surgery had positive(+) correlation with appearance maintenance behavior, and Yoo(2013)'s A Study of the Effect of Appearance Interests and Appearance Management Behavior on Aesthetic Plastic Surgery indicated high interest in plastic surgery and positive(+) effects and Lee(2008)'s College women Students' Perception of Cosmetic Surgery research demonstrated younger college students who

**Table 10.** Effect of demographic characteristics on self-esteem

Characteristics		Self-esteem Factors	M	S.D	F(t)
Gender	Men	Self-esteem	-0.22	0.90	-3.013**
	Women		0.11	1.03	
Age	10s	Self-esteem	-0.04AB	0.98	3.278*
	20s		0.12AB	1.04	
	30s		-0.19AB	0.85	
	40s		0.73A	1.06	
	Over 50s		-0.39B	0.84	
	Below high school		-0.06	0.89	
Education Level	Associate degree enrolled/ graduated	Self-esteem	-0.29	0.92	3.650*
	College enrolled/ graduated		0.15	1.01	
	Above grad school		0.18	1.30	
Marriage Status	Single	Self-esteem	0.04	1.02	1.403
	Married		-0.22	0.85	
	Other (divorced, bereaved, separated, etc.)		-0.15	0.68	
Monthly Income	Less than 1 million won	Self-esteem	0.41	1.08	8.089***
	Less than 1-2 million won		-0.30	0.96	
	Less than 2-3 million won		-0.25	0.73	
	Less than 3-4 million won		-0.44	1.13	
	Less than 4-5 million won		0.48	1.09	
	More than 5 million won		-0.17	0.66	

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$  Scheffé-test : A>B

are main customers of plastic surgery tend to be actively interested in appearance, thus partially supporting this research.

Therefore, dissatisfaction with current state resulted in appearance orientation, and previous studies partially support the outcome of this research.

To summarize, review events for promoting plastic surgery review on plastic surgery applications and encouraging active plastic surgery review teams on social media can lead to increased appearance orientation.

**Table 11.** Effects of plastic surgery perception on appearance orientation

Independent variable (plastic surgery perception)	Dependent variable (appearance orientation)	B	$\beta$	t	R <sup>2</sup>	Revised R <sup>2</sup>	F
(Constant)		2.500		.000			
Positive	Appearance orientation	-.125	-.125	-2.354 *	0.106	0.098	12.503 ***
Reaction		.239	.239	4.487 ***			
Improvement		.183	.183	3.440 **			

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

### 5. Effects of plastic surgery perception on self-esteem

Looking at multicollinearity of plastic surgery perception and appearance orientation prior to performing multiple regression analysis, VIF values were all under 10, making it reasonable to perform multiple regression analysis and the results are shown in <Table 12>.

First, self-esteem factor was approximately 15.3% explained by positive and improvement factors. Furthermore, higher preference for positive factor decreased self-esteem factor by -0.349 times, thus having negative effect. Higher preference for improvement factor increased self-esteem factor by 0.192 times, thus having positive effect.

Therefore, plastic surgery perception has partial positive effect on self-esteem and recognizing plastic surgery as a method of self-improvement, success factor and positive factor as well as having positive suggestion intention will have negative effect on self-esteem. Then, recognizing satisfaction level after plastic surgery and other people's reaction has negative effect on self-esteem. However, recognizing plastic surgery as a catalyst for change and

method of improvement for alleviating flaws will have positive effect on self-esteem.

Beak(2013)'s The Relations Between Body Image and Cosmetic Surgery Attitude: Focusing on the Mediating Effect of Narcissism and Self-esteem, and on the Moderating Effect of Gratitude research indicated current sociocultural attitude towards appearance had negative effect on teenager's body image and plastic surgery intentions, and Kim(2007)'s Effects of Aesthetic surgery on Body Image, Self-esteem and Satisfaction with Outcomes research, plastic surgery is considered a form of medical procedure which can be measured for its impact on quality of life for an individual and surgery had an overall negative(-) effect, while Lee(2002)'s A Study on aesthetic plastic surgery, self-esteem and body image of some women research acknowledged meaning of a person's appearance can vary depending on the time periods and cultures but concluded that it has positive(+) effect on self-esteem, interpersonal relationships and patterns of behavior.

According to the analysis, plastic surgery perception has partial effect on self-esteem, which highlights sociocultural attitudes about appearance and benefits of plastic surgery on

**Table 12.** Effects of plastic surgery perception on self-esteem

Independent variable (plastic surgery perception)	Dependent variable (self-esteem)	B	$\beta$	t	R <sup>2</sup>	Revised R <sup>2</sup>	F
(Constant)		3.341		.000			
Positive	Self-esteem	-.349	-.349	-6.766 ***	0.161	0.153	20.077 ***
Reaction		-.042	-.042	-.813			
Improvement		.192	.192	3.714 ***			

\*\*\*\* $p < 0.001$

**Table 13.** Effects of interest in appearance on appearance orientation

Independent variable (interest in appearance)	Dependent variable (appearance orientation)	B	$\beta$	t	R <sup>2</sup>	Revised R <sup>2</sup>	F
(Constant)		2.515		.000			
Interest in appearance	Appearance orientation	.221	.221	4.041 ***	0.049	0.046	16.327 ***

\*\*\* $p < 0.001$

self image, self-esteem, satisfaction and one’s quality of life, thus indicating partial support between previous studies and this research.

To summarize, increasing plastic surgery satisfaction through 3D virtual plastic surgery system and after-service happy calls can lead to increased self-esteem.

**6. Effects of interest in appearance on appearance orientation**

Looking at multicollinearity of plastic surgery perception and appearance orientation prior to performing multiple regression analysis, VIF values were all under 10, making it reasonable to perform multiple regression analysis and the results are shown in <Table 13>.

First, appearance orientation factor was approximately 4.6% explained by interest in appearance factor. Furthermore, higher preference for interest in appearance factor increased appearance orientation factor by 0.221 times, thus having positive effect.

According to the outcomes, interest in appearance factor has negative effect on appearance orientation, and recognizing one’s interest about other’s views about appearance, image-making, appearance maintenance and development has negative effect on appearance orientation as well as satisfaction.

Lee(2021)’s The Effect of Self-respect and Satisfaction on Career Stress and Career Satisfaction in University Student Preparing for Employment research stated perception of one’s own body and satisfaction with one’s appearance can be largely negatively influenced by cultural standards of the times, and Yoo(2013)’s A Study of the Effect of Appearance Interests and Appearance Management Behavior on Aesthetic Plastic Surgery research indicated degree of interest in appearance and maintenance behavior can have negative effect on proper awareness of plastic surgery and interest in appearance.

According to the analysis outcomes, interest in appearance is influenced by perception of one’s own appearance, satisfaction

with appearance and proper awareness of plastic surgery through appearance orientation, thus supporting previous studies as well as this research.

To summarize, interest in appearance can be increased through appearance orientations such as participating in body photo shoots and beauty pageants.

**7. Effects of interest in appearance on self-esteem**

Looking at multicollinearity of plastic surgery perception and appearance orientation prior to performing multiple regression analysis, VIF values were all under 10, making it reasonable to perform multiple regression analysis and the results are shown in <Table 14>.

Self-esteem factor can be explained by interest in appearance factor approximately 8.1%, and higher inclination for interest in appearance factor increases self-esteem factor by 0.290 times, thus having positive effect.

Therefore, interest in appearance factor has positive effect on self-esteem and awareness of others’ perceptions, image-making, appearance maintenance and interest in appearance factor have positive effect on self-esteem.

Jung(2018)’s The Effect of SNS Usage of Female College Students on Beauty Interest and Self-Esteem-Focused on Gwangju Metropolitan City Area research showed that when using social network sites for beauty information, less sharing and more consistency and utility increased self-esteem, thus having positive effect, Lee(2013)’s A Study on the Body Image and Sense of Psychological Stability Related to the Outward Appearance Management research showed that teenagers who are high in beauty interest and therefore highly interest in taking care of their looks demonstrated positive(+) effect of beauty interest on appearance satisfaction and self-esteem.

According to the research outcome, higher interest in appearance meant longer time invested in taking care of oneself, which leads to higher self-esteem, thus partially supporting outcomes of previous studies and this research.

**Table 14.** Effects of interest in appearance on self-esteem

Independent variable (interest in appearance)	Dependent variable (self-esteem)	B	β	t	R <sup>2</sup>	Revised R <sup>2</sup>	F
(Constant)		1.003		.000			
Interest in appearance	Self-esteem	.290	.290	5.392 ***	0.084	0.081	29.072 ***

\*\*\* p<0.001

To summarize, in order to increase interest in appearance, participating in self-makeup classes to increase self-esteem can increase overall interest in appearance which can result in general higher levels of self-esteem.

## V. Conclusion

Purpose of this research is to determine the effects of plastic surgery perception and interest in appearance on appearance orientation and self-esteem in order to find ways to encourage appearance orientation and increase self-esteem, and results are the following.

First, positive factor of plastic surgery perception variable has negative(-) effect on appearance orientation factor of appearance orientation variable, and reaction and improvement factors of plastic surgery perception variable have positive(+) effect on appearance orientation factor of appearance orientation variable. Also, positive factor has negative(-) effect on self-esteem, and improvement factor of plastic surgery perception variable has positive(+) effect on self-esteem. Second, interest in appearance has positive(+) effect on orientation factor of appearance orientation variable. Also, interest in appearance has positive(+) effect on self-esteem. Suggested solutions based on these findings are the following.

First, those who considered plastic surgery as important in self-management, success and happiness had rather less desire to work on improving their appearance and less appearance orientation, and it's probably that these people already had high enough self-esteem to admit the importance of plastic surgery while not feeling the need for plastic surgery themselves.

Awareness of successful plastic surgery outcomes and improvements have positive effect on orientation factor of appearance orientation variable and self-esteem. Hence, providing happy-call services that check up on people after they get plastic surgery and providing virtual 3D plastic surgery can help improve plastic surgery perception, which can then positively influence appearance orientation and self-esteem.

Second, those who wished to impress others by image-making had greater desire to become more beautiful and slender. Therefore, utilizing body-positive photo shoots and beauty pageants as motivation for continued interest in exercise can help people become more appearance oriented in positive ways. Also, those who focus on image-making tend

to consistently take care of themselves and reported higher satisfaction with their current body proportions and weight, and viewed themselves as highly worthy people. Therefore, participating in activities like self-makeup courses can increase confidence in taking care of one's appearance, which can then increase one's self-esteem.

For future research, since there is continued interest in plastic surgery perception and purposeful approach to plastic surgery as well as variety of events and programs that draw attention from people that can positively impact appearance orientations and self-esteem, it'll be meaningful research to connect behavior characteristics to psychological characteristics to discover influential relationships among those variables.

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