

Factors on Cosmetic Surgery among University Students

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Abstract

Background/Objectives: The purpose of this study was to explore factors related to cosmetic surgery that can threaten physical, psychological and social health of university students. **Methods/Statistical Analysis:** Data were collected by questionnaires of self-esteem, appearance concern, body-esteem, and relationship from university students in Korea on September 25-October 30, 2015. Answer sheets of 225 respondents were gathered, and 222 of them were analyzed except for 3 incomplete one. The collected data were analyzed using descriptive statistics, t-test, ANOVA, χ^2 -test, Pearson's correlation coefficients, and logistic regression analysis. **Findings:** Results show that age, gender, residential type, and cosmetic surgery experience of family and relatives were significant factors. Predicators were over 21 (age), female (gender) and those who have a family member or a relative who have experienced cosmetic surgery. They are relational variables rather than psychological variables. **Improvements/Applications:** Further studies are needed to specify social and psychological mechanism related to cosmetic surgery of university students as well as relational variables.

Keywords: Cosmetic Surgery, Logistic Regression, University Student

1. Introduction

According to the survey on the number of cosmetic surgery among each country by International Society of Aesthetic Plastic Surgery (ISAPS), Korea was ranked world's fifth place and recorded as 5.3% among the total number of cosmetic surgery operated in top 30 countries¹. However, this rank did not count in the number of population and it is 13.5 surgery cases per 1000 of population which is the largest number of cosmetic surgery in the world². Also, 69.9% of adult women experienced in having a stressful moment because of their appearance and they recognized cosmetic surgery as a helpful method to supplement physical weak points or physical parts that they feel unsatisfied with³. According to a survey with citizens in Seoul, there is the increasing number of citizens who answer yes to cosmetic surgery for changing their looks every year⁴.

An interest in appearance is not a new phenomenon but compared to old generation, it is rapidly increasing which should be received attention and especially, cosmetic surgery is not rare case to university students in Korea and it is true that an interest in having a cosmetic surgery is dramatically growing. Recently, Korean society regards physical beauty as a personal competency⁵ and its importance is being emphasized for strong interpersonal skill⁶. According to results from the study conducted with 1,086 university students in freshman year, 3.9% of 363 male students were planning to have a cosmetic surgery and 16.5% of 723 female students were also planning to have a cosmetic surgery⁷. As it was demonstrated above, university students in Korea pursue having a cosmetic surgery as a social means for finding job and giving a good impression in interviews and establishing a good interpersonal relationship and it is forecasted that this trend will be intensified. However, all type of physical

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surgery has a potential of side effect and in fact, there is the increasing number of medical sue cases because of side effect from cosmetic surgery every year⁸. The survey⁹ conducted with 900 female university students who had cosmetic surgeries demonstrates that 9.9% had a temporary side effect and 8.1% had a permanent physical damage and the survey conducted by Ministry of Health and Welfare¹⁰ also shows that 12% of female students who had cosmetic surgeries experienced side effects.

With the number of having cosmetic surgery increases, there is no way to avoid side effects which frequently occur, nevertheless, surveys of people's attitudes toward cosmetic surgery just begin to be conducted now². In the society with 'lookism', women become more interested in how they look to satisfy the standard and they even choose cosmetic surgery to get rid of their physical complex. In¹¹ pointed out that cosmetic surgery is being transformed into a means of taking care of appearance and depending on individuals, it is for strengthening self-identity and a means of carving out fortune.

According to the previous study of influential factors on the need to have a cosmetic surgery, self-esteem, physical image, and attitude toward plastic surgery influence the need of cosmetic surgery^{3,12}. Many students with medium level of self-esteem had cosmetic surgeries and women with negative self-physical images and low self-esteem had strong interests in having cosmetic surgery^{12,13}. Furthermore, the more positive attitude toward self-physical images they have higher self-esteem they have. Meanwhile, negative self-physical image was strongly correlated with sense of inferiority and low self-esteem³. There was also a report saying that appearance-oriented attitude and physical satisfaction are related with decision to have cosmetic surgery and the lower self-physical satisfaction they have, more positive attitude toward having cosmetic surgery they have¹². Satisfaction level on body or physical appearance is significantly correlated with personal values to perceive their own selves or belief, therefore, most of people form negative self-concepts when the self-images they perceive do not come up to the ideal standard accepted by society and this influences building desirable interpersonal relationship^{14,15}.

As a result, it is important to establish positive self-concept to form desirable interpersonal relationship so it is suggested to examine self-physical satisfaction, level of interest in physical look, self-esteem and interpersonal relationship which are influential factors on decision to have cosmetic surgery. For this reason,

the purpose of this study is to examine current boom in plastic surgery among university students in Korea and investigate level of interest in physical look, self-appearance satisfaction, self-esteem, and interpersonal relationship which are the influential factors on decision making to have cosmetic surgery for strengthening right understanding of the factors. Also, this study is to identify the students' thoughts and belief about having cosmetic surgery.

2. Research Method

2.1 Study Design

This study is a cross-sectional descriptive research to explore factors influencing cosmetic surgery of university students.

2.2 Samples

The participants of this study were university students in Korea, and the survey was conducted in 2015. 222 university students participated in the survey after informed consent. The required sample size was estimated by G*Power 3.1.9.2 Program. The minimum required sample size was 188 with Odds Ratio=1.5, $\Pr(Y=1 | X=1)H_0=0.5$, significance level (α) 0.05, power of test ($1-\beta$) 0.85.

2.3 Measurements

Self-esteem

Self-esteem was measured using Self-Esteem Scale developed by¹⁶. The scale consists of 10 questions, 5 positive feelings and 5 negative feeling about the self, on a 4-point Likert scale (1= strongly disagree, 4=strongly agree), and the total score range is 10-40. Higher scores indicate a higher self-esteem. Cronbach's alpha for self-esteem in this study was .82.

Appearance Concern

Appearance Concern was measured using Multidimensional Body Self Relations Questionnaire (MBSRQ) developed by¹⁷, which was consisted of 1) evaluation about physical, 2) concern about appearance, and 3) concern about weight. This measurement consists of 24 questions on a 5-Likert scale (1= strongly disagree, 5=strongly agree), higher scores indicated a higher higher appearance concern. The total score range is 24-120, and Cronbach's alpha for appearance concern in this study was .84.

Body-esteem

Body-esteem was measured using KOBES (Korean Overall Body Esteem Scale) developed by¹⁸, which was consisted of 1) appearance esteem, 2) weight esteem, and 3) bodily function esteem. This measurement consists of 18 questions on a 5-Likert scale (1= strongly disagree, 5=strongly agree), higher scores indicated a higher body-esteem. The total score range is 18-90, and Cronbach's alpha for body-esteem in this study was .83.

Relationship

Relationship was measured using Relationship Change Scale (RCS) developed by¹⁹. The measurement was consisted of 25 questions on a 5-Likert scale (1= strongly disagree, 5=strongly agree), it was composed of seven subcategories; 1) satisfaction, 2) communication, 3) trust, 4) friendliness, 5) sensitivity, 6) openness, and 7) understandability. Higher scores indicated a higher Relationship, and The total score range is 25-125. Cronbach's alpha for Relationship in this study was .95.

2.4 Data Collection

Data collection was carried out on September 25 - October 30, 2015. The participants of this study were the university students in Korea. A total of 225 questionnaires were collected, and excluding 3 questionnaires which are insincere or missing answers, 222 answers were used for data analysis.

2.5 Data Analyses

The collected data were analyzed using SPSS/WIN 20.0 statistical program. Descriptive statistics for all study variables as well as the reliability assessment of the study instruments were computed. To analyze the differences in the independent and dependent variables, t-tests, One-way ANOVA, χ^2 -test were used. The correlations among the study variables were analyzed with Pearson's correlation coefficient. Also, logistic regressions were performed to explore factors influencing university students' cosmetic surgery

2.6 Ethical Considerations

Prior to collecting the data, the decision regarding consent for participation was made by university students. Participants also received information on this study including purpose, potential risks, and benefits of this study and the data collection procedures. Participants

who were reluctant to participate in this study could refuse participation at any time.

2.7 Limitations

This study was constricted by convenience sampling, which limited generalization to a broad population.

3. Results

3.1 Participant Characteristics

The General characteristics of the participants are shown in Table 1. Of the participants, 190 students (85.6%) were female and 32 students (52.6%) were male, and the mean age of them was 20.81 years old. As to religion, 97 students (46.0%) were Christian and 106 (47.7%) were atheist. 146 (65.8%) of the participants were of single, 112 (50.5%) were commuting to school. Whether cosmetic surgery of the family or relatives, 151 students (68.0%) responded 'yes' and 71 students responded 'no'. By whether cosmetic surgery status of own, 106 (47.7%) students had cosmetic surgery and 116 (52.3%) students did not have cosmetic surgery.

Table 1. General Characteristics of participants (N=222)

Characteristics	Categories	n(%), M±SD
Gender	Male	32(14.4)
	Female	190(85.6)
Age(year)	Average	20.81±1.702
	18-20	106(47.7)
	21-23	101(45.5)
	≥24	15(6.8)
Religion	Christian	86(38.7)
	Buddhism	11(5.0)
	Catholicism	19(8.6)
	Atheism	106(47.7)
Lover or marital status	Yes	76(34.2)
	No	146(65.8)
Residence type	Live apart from own family	110(49.5)
	Commute to school	112(50.5)
Whether Cosmetic Surgery of the Family or Relatives	Yes	151(68.0)
	No	71(32.0)
Whether Cosmetic surgery status of own	Yes	106(47.7)
	No	116(52.3)

3.2 Descriptive Statistics for Variables

Descriptive statistics for university student's self-esteem, appearance concern, body-esteem, and relationship are shown in Table 2. The mean level of self-esteem was 35.38 ± 5.69 point (range 10-40 point), the lowest score was 22 point, and the highest score was 50 point. The mean level of appearance concern was 77.27 ± 11.20 point (range 24-120 point), the lowest score 39 point, and the highest score was 109 point. The mean level of body-esteem was 60.12 ± 9.33 point (range 18-90), the lowest 28 point, the highest score 90 point. The mean level of relationship was 90.33 ± 13.52 point (range 25-125), the lowest 44 point, the highest score 125 point.

3.3 Difference of Cosmetic Surgery According to General Characteristics

It was shown that 106 (47.7%) out of 222 had cosmetic surgeries and 116 (52.3%) did not have a cosmetic surgery. Those who are over 21 years had higher probability to have cosmetic surgeries ($\chi^2=15.45$, $p<.001$), females ($\chi^2=7.76$, $p=.005$), those who lived alone or at dormitory ($\chi^2=5.19$, $p=.023$), and those who had a family or relative

Table 2. Descriptive Statistics for Variables (N=222)

Variables	subcategory	Range	M±SD	Min	Max
Self-esteem		10-40	35.38 ± 5.69	22	50
Appearance Concern	Total	24-120	77.27 ± 11.20	39	109
	Evaluation about Physical	5-25	14.03 ± 3.08	6	23
	Concern about Appearance	13-65	45.33 ± 7.38	16	64
	Concern about Weight	6-30	17.92 ± 4.87	6	30
Body-esteem	Total	18-90	60.12 ± 9.33	28	90
	Appearance-esteem	6-30	21.53 ± 3.98	11	30
	Weight-esteem	3-15	8.62 ± 2.01	3	15
	Bodily Function-esteem	9-45	29.96 ± 5.09	14	48
Relationship	Total	25-125	90.33 ± 13.52	44	125
	Satisfaction	4-20	13.92 ± 2.77	4	20
	Communication	4-20	14.86 ± 2.48	7	20
	Trust	3-15	10.63 ± 1.87	3	15
	Friendliness	3-15	11.34 ± 2.00	4	15
	Sensitivity	2-10	7.30 ± 1.39	3	10
	Openness	5-25	17.60 ± 3.18	5	25
	Understandability	4-20	14.68 ± 2.42	8	20

who had cosmetic surgeries ($\chi^2=32.87$, $p<.001$) showed higher probability in Table 3.

3.4 Correlation among Main Variables

Correlations among main variables are shown in Table 4. The Self-esteem was in a significant correlation with body-esteem ($r=.577$, $p<.001$), relationship ($r=.627$, $p<.001$). The Body-esteem was in a significant correlation with relationship ($r=.510$, $p<.001$).

3.5 Factors on Cosmetic Surgery among University Students

To identify factors influencing on cosmetic surgeries of university students, a logistic regression analysis was executed setting cosmetic surgery as a dependent variable, self-respect, interest in appearance, body esteem, social relations and significant general characteristics (age, gender, type of residence, cosmetic surgery experience of family or relatives) as independent variables. It was found that predicative factors influencing on cosmetic surgeries of university students were age over 21 ($B=1.301$, $p<.001$), female ($B=1.363$, $p=.006$), and having family member or relative with cosmetic surgery ($B=1.674$, $p<.001$). It was also found that sensitivity was 51.9% and singularity was 85.3% in Table 5.

Table 3. Cosmetic Surgery According to General Characteristics

Characteristics	Categories	Cosmetic Surgery n(%)		$\chi^2(p)$
		Yes	No	
Age(year)	< 21	36(16.2)	70(31.5)	15.45(<.001)*
	≥ 21	70(66.0)	46(20.7)	
Gender	Male	8(3.6)	24(10.8)	7.76(.005)*
	Female	98(44.1)	92(41.4)	
Residence type	Live apart from own family	61(27.5)	49(22.1)	5.19(.023)*
	Commute to school	45(20.3)	67(30.2)	
Whether Cosmetic Surgery of the Family and Relatives	Yes	92(41.4)	59(26.6)	32.870(<.001)*
	No	14(6.3)	57(25.7)	

* $p<.05$

Table 4. Correlation among Main Variables (N=222)

	Self-esteem	Appearance Concern	Body-esteem	Relationship
Self-esteem	1			
Appearance Concern	.080	1		
Body-esteem	.577**	.115	1	
Relationship	.627**	.092	.510**	1

* $p<.001$

Table 5. Influencing Factors of University student's Cosmetic Surgery (N=222)

Variable	B	S.E.	Wals	OR	p
Age (>21y)	1.301	.321	16.438	3.672	<.001
Gender (female)	1.363	.498	7.485	3.910	.006
Whether Cosmetic Surgery of the Family or Relatives	1.674	.359	21.767	5.335	<.001
Constant	-1.189	.254	21.902	0.305	<.001

$\chi^2=55.438$, $p<.001$

Hosmer-Lemeshow $\chi^2=5.052$, $p=.282$

4. Discussion

This study was conducted to find out influential factors on decision to have cosmetic surgery by investigating level of interest in physical look, self-physical satisfaction, self-esteem, and interpersonal relationship among university students. Among 222 study subjects, 47.7% of total subjects had cosmetic surgeries. This was the larger number than the percentage, 25% of 2,041, shown in the previous study²⁰ and according to survey of the number of cosmetic surgery by International Society of Aesthetic Plastic Surgery (ISAPS), Korea's world rank jumped from 7th to 5th place from 2011 to 2015 which suggests that cosmetic surgery is becoming popularized and generalized¹. Recently, many celebrities are coming out their experiences in having plastic surgeries and general public regards cosmetic surgery as an index showing high economic status and part of self-management²¹. However, constant increase of cosmetic surgery rate and ranked as one of top countries for cosmetic surgery^{1,2} are the strong reason to consider this as a serious social issue which needs to be regulated. Current situation in Korea is that there is no organized

or legal way to manage various information including unprecedented examples of cosmetic surgery, safety issue, and verification of doctor certificate²¹.

Among general characteristics of study subjects, age ($\chi^2=15.45$, $p=.001$), gender ($\chi^2=7.76$, $p=.005$), residence type ($\chi^2=5.19$, $p=.023$), and whether cosmetic surgery of the family and relatives ($\chi^2=32.87$, $p=.001$) showed significant differences. It showed that females over 21 years old are more interested in cosmetic surgery. The study conducted by²² showed that age and self-physical image are significantly correlated and older age group had more experiences in having cosmetic surgeries than younger age group²³. This suggests that as the students go to upper level and are in the entry into society such as finding career, their interests in appearance become higher and consequently, consideration of having cosmetic surgery becomes higher as well. Furthermore, according to studies by²² and²⁴, it was found that female students are more like to internalize factors influencing physical appearance and female teenagers have more acceptable attitude toward social and cultural trend of physical look which are very similar results with the results from this study. Self-esteem among university students was significantly correlated with satisfaction of self-physical appearance ($r=.577$, $p=.001$) and interpersonal relationship ($r=.627$, $p=.001$). In the previous study, there was also significant correlation between satisfaction level of physical appearance, physical image, self-esteem, and interpersonal relationship and physical appearance evaluation and satisfaction level of physical look were strongly correlated with self-esteem level and those results are also similar with results from this study^{22,25}. Moreover, satisfaction level of physical appearance was positively related with interpersonal relationship ($r=.510$, $p=.001$) and²² also said that physical image perceived by self is the variable most strongly correlated with ability for interpersonal relationship. This demonstrates that positive self-perception is important to establish mature interpersonal relationship.

Finally, to find out relative influence of the factors influencing decision making to have cosmetic surgery, logistic regression was conducted and according to the results, it was found that factors, whether family or relative had cosmetic surgery ($B=1.674$, $p=.001$), female ($r=1.363$, $p=.006$), and over 21 years old ($r=1.301$, $p=.001$) influence decision making to have cosmetic surgery. In²⁶ said that the more experiences they have in cosmetic surgery and more acceptable attitude they have, higher level of plastic surgery addiction they have and women are

mostly influenced by same sex peers or friends when they consider having cosmetic surgery¹⁰. In addition, there is a study saying that experience in having cosmetic surgery is a most important factor to forecast potential possibility to have cosmetic surgery in the future¹³. This suggests that not only one's own experience in having cosmetic surgery but also other people's experience in having cosmetic surgery influence decision making to have cosmetic surgery and this supports results from this study as well. This can be explained that people are strongest factor when making decision to have cosmetic surgery and people who already experienced in having cosmetic surgery place more value on physical look.

Considering those study results, it is required to encourage university students to place more value on inner beauty and feel proud of their natural physical looks. It was found that self-esteem and appearance managing behavior influence physical image and physical image and self-image influence establishing interpersonal relationship^{22,27}. This study also showed that self-esteem is correlated with level of physical satisfaction and interpersonal relationship. Therefore, it is required to develop a program to improve positive attitude toward students' own physical image and self-esteem so that university students are able to build up mature interpersonal relationship with positive self-perception and image.

The factors that can predict cosmetic surgeries of university students were found as age over 21, female, and having family member or relative with cosmetic surgery, which shows that relational variables rather than psychological variables made bigger influence on the decision of university students to have cosmetic surgeries. More researches should be made in the future to identify the factors influencing cosmetic surgeries of university students.

5. Conclusion

The purpose of this study is to find out factors influencing decision making to have cosmetic surgery by investigating level of physical satisfaction, interest in physical look, self-esteem, and interpersonal relationship. According to study results, it was found that family or relatives' past experiences in having cosmetic surgery, gender, and age influence decision making to have cosmetic surgery. Also, it was found that self-esteem is correlated with level of physical satisfaction and interpersonal relationship. Therefore, it is required to develop a program helping

university students to improve their self-esteem. Based on this study, suggests can be made as follows.

- For generalization of study, repetitive studies considering various variables need to be conducted.
- Programs to improve self-esteem need to be developed.

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