



Perception of cosmetic surgery and associated side effects

A content analysis study of South Korean female college students

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Abstract

This study explores the perception of female college students in South Korea regarding cosmetic surgery and its side effects.

Face-to-face interviews were conducted with 28 female college students over a period of 4 months, starting in October 2019. All participants were female college students who had not undergone cosmetic surgery. The collected data were analyzed qualitatively, using conventional content analysis.

Four categories and 13 subcategories were extracted from 112 meaningful codes reflecting perceptions related to cosmetic surgery and its associated side effects. The 4 categories that emerged in the study were: "reaction to the side effects of cosmetic surgery", "reasons for cosmetic surgery", "prospects of the participant's own cosmetic surgery", and "prerequisites for decision-making regarding cosmetic surgery".

The results of this study could be used as reference material by surgeons to ensure safer cosmetic surgeries. A sufficient consideration period and patient education prior to selective cosmetic surgery would minimize patient complaints and expand the base of safe cosmetic surgery.

Keywords: perception, plastic surgery, qualitative research, side effects, women

1. Introduction

Advances in medical and technological innovations have led to the availability of numerous medical services, including a variety of cosmetic surgeries that are gaining popularity, from minimal and noninvasive procedures to major plastic surgeries.^[1–3] Facial cosmetic surgery is extremely popular among South Korean adults in their 20s and 30s, with women accounting for an overwhelmingly larger proportion than men.^[4,5]

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With the popularity of cosmetic surgery, side effects such as failure of surgery, unexpected infections, and safety accidents are increasingly common, and these can have physical, psychological, and social consequences. [6–9] The Ministry of Health and Welfare of Korea reported that 52.5% of female college students underwent cosmetic surgery, and 12% experienced side effects. [10] Additionally, the gradual decrease in the age at which cosmetic surgery is attempted in South Korea has also led to concerns regarding side effects. [11]

However, despite the side effects, female college students in South Korea have had or intend to have cosmetic surgery, "to gain confidence", "to become beautiful", or "to get a job". [10,12] They seem to believe that the benefits of cosmetic surgery outweigh the risk of side effects. In general, personal perception is an important factor that determines health-related behaviors. [13] Risk perception is often a factor that is considered while implementing and planning health behavior change interventions, and risk perception interventions can have an impact on subsequent health related behaviors. [14] However, the channels of information regarding the side effects of cosmetic surgery that affect the perception of female college students in South Korea tend not to involve communication by medical professionals, but rather the Internet and television.^[15] Lack of high-quality information regarding the side effects and surgical complications associated with cosmetic surgery is not only a problem observed in South Korea but also in the United States. [9,16] Therefore, specific and detailed information regarding the perception of female college students in South Korea about cosmetic surgery and the associated side effects is needed to help understand the extent to which they are well or poorly informed and to devise strategies to influence appropriate health-related behavior in relation to cosmetic surgery.

To obtain such specific and detailed information, a qualitative study that explores the subjective opinions of research participants in a broad and inductive manner is likely to be more valuable than a

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quantitative study that focuses more on the relationship between specific hypothetical variables. ^[17] Therefore, this study aimed to qualitatively explore the perception of cosmetic surgery and its associated side effects in female college students in South Korea using content analysis.

2. Methods

This qualitative study was conducted from October 2019 to January 2020 to investigate the perception of cosmetic surgery and associated side effects in female college students in South Korea through in-depth interviews. The categories and subcategories were identified through content analysis.

2.1. Participants

The participants in this study were female college students who had not undergone cosmetic surgery. They were recruited through snowball sampling. Those students who gave their written informed consent to participate after being provided with information concerning the objective and intention of the study were selected as participants and were asked to realistically discuss their perception of cosmetic surgery and the associated side effects. The participants could withdraw their consent at any time after the study began, and students who did not agree to participate were excluded from the study. A total of 28 participants were interviewed 1 to 3 times each, and the average time required for the interviews was 29 minutes per person. Each participant was given a gift card worth \$20 for the initial face-to-face interview, and any additional interviews were conducted telephonically.

2.2. Data collection

The data for this study were collected through in-depth face-to-face interviews in quiet offices and coffee shops. All interviews were recorded and transcribed with the permission of the participants. The first semi-structured question used in the interview was, "If you know any side effects of cosmetic surgery, please feel free to tell me what comes to mind". During the interviews, questions such as, "What are the side effects of cosmetic surgery?" or "Why do people choose to have cosmetic surgery despite the side effects?" were asked to help the participants express their perception of cosmetic surgery and the associated side effects. Additionally, during the interview, the researchers used therapeutic communication skills such as clarification, reflection, and empathy to help participants focus on the subject of the study and comfortably engage in the interview. Data about the general characteristics of the participants were collected at the end of the interviews.

2.3. Data analysis

Data analysis was conducted using the conventional content analysis method introduced by Hsieh and Shannon. [18] To begin, the researchers sought to understand the overall meaning of the responses by carefully reading all the transcribed data repeatedly without predetermining categories. Subsequently, while reading the data which were transcribed verbatim, the researchers selected and coded the words, sentences, and paragraphs that contained important thoughts or concepts. The researchers noted first impressions, thoughts, and initial analysis, and then read the texts again together, to help determine relevant codes after several reflective processes. Related codes were collected and classified into

sub-categories, and finally, the categories were identified. The degree of concordance between researchers was reconfirmed through the process of deciding whether to continue data collection through conversation, extracting concepts, and naming categories. To maintain research consistency and data analysis neutrality, a research note was kept, and regular researcher meetings were held.

2.4. Ethical considerations

This study was approved by the Institutional Review Board of Jeju National University (JJNU-IRB-2019-032). In addition, all procedures were in accordance with the ethical standards of the 1964 Helsinki declaration and its later amendments. The students provided written informed consent to participate in the study.

3. Results

The age of the study participants ranged from 19 to 22 years (average: 20.4). Specifically, 8 students were in their first year of university, 7 students in their second year, 8 students in their third year, and 5 students in their fourth year. All the participants knew about cosmetic surgery and the side effects associated with the procedures. Of the 28 participants, 12 stated that they would like to undergo cosmetic surgery or procedures in the future. A total of 112 meaningful codes reflecting their perception regarding cosmetic surgery and the associated side effects, and 4 categories and 13 subcategories were identified from the codes. The 4 categories identified in the study included, "reaction to the side effects of cosmetic surgery", "reasons for cosmetic surgery", "prospect of the participant's own cosmetic surgery", and "prerequisites for decision-making regarding cosmetic surgery".

3.1. Reaction to the side effects of cosmetic surgery 3.1.1. Awareness. Participants said that knowledge of the possible side effects of cosmetic surgery could lead to reconsideration of their decision or even deciding not to undergo the procedure. On the other hand, some participants were concerned that knowledge of possible side effects was declining despite the popularization of cosmetic surgery.

"A lot of people undergo cosmetic surgery these days, and people do not seem to be aware about the side effects. However, I believe information about the adverse effects will make people reconsider their decision or decide not to undergo the surgery." (Participant 1).

"The media has warned about the numerous adverse effects but people do not seem to be aware of them." (Participant 15).

3.1.2. Fear. Participants said that fear could deter people who are concerned about the side effects from undergoing cosmetic surgery. It was also mentioned that the fear of side effects may have differing effects on individual decision-making for cosmetic surgery.

"We do not know what kind of side effects we will experience. It may seem fine now, but we do not know how things will shape up." (Participant 2).

"I think the fear of side effects would discourage me." (Participant 22).

- **3.1.3. Denial.** Participants said that there were cases where people did not think that they would experience any side effects as the probability of side effects due to cosmetic surgery was believed to be low.
 - "I think people undergo the procedures assuming that they would not experience any side effects. The chances of serious side effects are not so high anyway." (Participant 6).
 - "I have heard of the possible side effects, but people still undergo cosmetic surgery. This makes me believe that I will not experience any side effects . . . " (Participant 18).
- **3.1.4.** Minimal influence due to a desperate desire for change. Participants said that concern over side effects would not influence the decision-making of people who are desperate to undergo cosmetic surgery and who have high expectations regarding the changes in their appearance after cosmetic surgery. This view could also be associated with a sense of hope.
 - "I think people who are really desperate will undergo surgery even though they know about the side effects. Those around me, who really wanted to do it, went for it. They even slept while sitting to reduce the swelling after blepharoplasty. They were really determined." (Participant 4).
 - "Hope for improvement: Those who undergo cosmetic surgery despite knowing the side effects must be really desperate for it." (Participant 15).

3.2. Reasons for cosmetic surgery

- **3.2.1.** Improvement in appearance. Participants stated that improving appearance was the predominant reason for undergoing cosmetic surgery. They mentioned that satisfaction of the desire to become beautiful would assist those having undergone cosmetic surgery in overcoming social inhibitions and would improve their confidence.
 - "It helps them overcome complexes and become more confident in front of other people. They gain more confidence." (Participant 8).
 - "Would it not make them feel more comfortable in front of other people when they are more beautiful and confident? Confidence will make them more outgoing and help them to form better relationships with others." (Participant 28).
- **3.2.2. Self-satisfaction.** Participants said that people underwent cosmetic surgery because they were not satisfied with their facial features or body parts. For some participants, self-satisfaction was seen as the sole purpose of the surgery.
 - "People may not be satisfied with how their face or body looks when it does not meet their own standards of beauty. Cosmetic surgery may get rid of your personal charm, but this charm does not matter if a person is not satisfied with themself." (Participant 2).
 - "For self-satisfaction: Thinking, 'this procedure will make me prettier' and 'just a small fix here will help'." (Participant 3).

- **3.2.3.** Response to lookism. Participants said that people had cosmetic surgery to make a good first impression at work or in interpersonal relationships, and to gain a better position in an appearance-oriented society, where social perspectives and treatment are heavily dependent on a person's appearance and influenced by media, such as social networking services and television.
 - "People are concerned about their appearance. Even elementary school students have begun to wear makeup. There is a general perception in society that 'appearance matters'." (Participant 3).
 - "I have heard that women with low self-confidence have cosmetic surgery more frequently to keep up with the appearance-oriented society in South Korea. While the perceptions of the people or society remain the same, I think women will undergo plastic surgery despite the side effects to keep up with the standards of beauty." (Participant 24).
- 3.3. Prospect of the participant undergoing cosmetic surgery
- **3.3.1.** Willing to undergo surgery. Regarding their intention to undergo cosmetic surgery, 7 participants stated that they would like to undergo noninvasive procedures due to their fear of surgical operations, 4 participants stated that they would like to undergo blepharoplasty in future, and 1 participant was considering breast augmentation.
 - "I may want a face-lift when my face starts sagging as I get older." (Participant 1).
 - "I would consider it when I get a lot of wrinkles in future." (Participant 10).
- **3.3.2.** Not willing to undergo surgery. Ten participants stated that they were satisfied with how they looked and did not feel the need to undergo cosmetic surgery. Six participants stated that they were not even considering noninvasive procedures due to fear and a sense of burden.
 - "I can improve my expression and the shape of my face on my own. I have never considered cosmetic surgery. I intend to live the way I was born." (Participant 18).
 - "The stakes to undergo cosmetic surgery seem to be too high for the pursuit of beauty. I may not go for it." (Participant 11).
- 3.4. Prerequisites for decision-making regarding cosmetic surgery
- **3.4.1.** *Many consultations.* Most participants (27 participants) recommended visiting several medical institutions (2 to 10, mean 4.3) for comparison instead of visiting just 1 institution in deciding to have cosmetic surgery. They also recommended discussing whether to have cosmetic surgery with people near to them prior to making the decision.

"I think one should visit at least three hospitals. It would be important to visit many places for comparison." (Participant 3).

"I think they should compare at least five hospitals and seek advice from people around them." (Participant 10).

3.4.2. Consideration period. Participants said that it would be desirable to have a consideration period (1 week to 1 year, mean: 5 months), considering the irreversibility of cosmetic surgery. They considered that, in the process of making a careful decision, a person's thoughts about cosmetic surgery may change, but that, if a person has given enough thought when deciding, they would be able to cope better with the possible side effects.

"I would not stop my friends from having cosmetic surgery, if they really want it. However, I will still recommend that they should think twice about it." (Participant 8).

"I think it requires a lot of thought, but many people seem to just jump in." (Participant 15).

3.4.3. Sufficient information. Participants said that it would be necessary to do research and go through all the relevant information, including the side effects associated with cosmetic procedures. Some considered that having a sufficient amount of information was more important than the consideration period.

"Once you have decided to have cosmetic surgery, you need to do your research about the side effects." (Participant 4).

"If you want to have cosmetic surgery, you need to know more about it. People only see the bright side. You really need to know everything, including the negative side." (Participant 8).

3.4.4. Healthy self-love. Many participants recommended developing a healthy self-love, embracing oneself as one is, and improving one's looks through means other than cosmetic surgery, leaving cosmetic surgery as the last resort and only after careful consideration.

"You could try to find your own charm in your natural face instead of making artificial improvements by cosmetic surgery. There is no way of reversing cosmetic surgery. You should be careful'." (Participant 18).

"You really should try to be confident about your body and face no matter how you look or what your body type is, appreciating the good things that you have. You should take care of what is inside before working on the outside." (Participant 25).

4. Discussion

Female college students in South Korea were found to be aware of the side effects of cosmetic surgery and had various related concerns, which accords with similar studies on other population groups.^[19,20] Nevertheless, almost half of the study participants considered that people were drawn to consider undergoing cosmetic surgery for various reasons including a desperate desire for a change in their appearance after cosmetic surgery, belief that there would be no negative side effects, self-satisfaction, and in response to the expectations of society. Regarding the decision-making process for cosmetic surgery, the participants recommended that those considering cosmetic surgery should have the option of several consultations, a reasonable consideration period, and sufficient information be provided, while a healthy self-love should be encouraged in the meantime. Cosmetic surgery practitioners could focus on these factors when seeking to alleviate the side effects of cosmetic surgery.

Side effects and complications arising due to cosmetic surgery are common and have been repeatedly reported in recent studies. [16] The results of this study show that, to reduce unnecessary alarm and fear of the side effects associated with cosmetic surgery, relevant information must be provided through appropriately informed channels and methods involving professionals in the field. Studies have shown that many people intending to undergo cosmetic surgery use online platforms to gather and share advice. [3,21] Many cosmetic surgery experiences are posted on online platforms, including social networking services; the participants of this study also expressed their familiarity with information regarding cosmetic surgery on these platforms. Taking this into consideration, more medical professionals should be involved in providing information. This could lead to a positive change in otherwise negative reactions identified in the "reaction to the side effects of cosmetic surgery" category.

The quality and quantity of information, as well as communication with a medical professional, influence the perception of medical treatment, and the community and family play an important role in decision-making. [22,23] Losing patient confidence is a potential risk in the field of cosmetic surgery. [24] While people may seek to identify who can be trusted for such surgery, they may be confused due to the extensive marketing used. In response, practitioners of cosmetic surgery are recommended to consider conducting evidence-based promotion and counseling activities online. [21,25]

Estheticians need to be open to varying views concerning beauty, culture, or the social environment held by their patients and listen to their patients' viewpoints sympathetically. [26] Additionally, adequate patient education is required prior to cosmetic surgery, and there is a need to openly discuss the number of treatments and the time (weeks to months) required to achieve the desired results. [3] Providing sufficient information to patients is also a major determinant of treatment satisfaction. [23] In this study, participants also recommended careful decision-making for cosmetic surgery, after a sufficient consideration period and adequate consultation with a medical institution. Provision of sufficient education before selective cosmetic surgery contributes to minimizing patient complaints.

Terms identified regarding how interactions with plastic surgeons could be improved have included, "informing", "listening", "acknowledging", "clarifying", and "moving forward". [24] However, approaches sensitive to these identified terms have not always been applied in the field of plastic surgery, despite this being a field where subjective results are often more important than traditional indicators of outcome. The qualitative methodology used in this study facilitates the exploration of more complex issues that can arise in such fields, such as why patients choose to undergo plastic surgery, which has been explored in

previous research, [17] and can provide an understanding of previously unrecognized social phenomena. [24]

While not seeking to generalize the experiences of women, qualitative research can be used to add depth to quantitative research in specific areas affecting women, which this study sought to do. The limitations of this study include its small sample size that the participants only comprised female college students in South Korea, and that only female college students who had not experienced cosmetic surgery were targeted. However, this study is significant as it showed that these participants were informed of the side effects of cosmetic surgery but that they expected that the surgery could be conducted safely.

5. Conclusions

The results of this study provide a more in-depth understanding of the perception of the side effects associated with cosmetic surgery in South Korean female college students. The insights from this study can be used to prepare educational material for medical service users to help them in careful decision-making and help guide the development of more effective health care policies. We recommend additional research to develop a questionnaire which can help subjects choose cosmetic surgery and prevent its side effects.

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References

- ISAPS. ISAPS global statistics. Hanover (NH): International Society of Aesthetic Plastic Surgery; 2020. Available at: https://www.isaps.org/medical-professionals/isaps-global-statistics/. Accessed February 1, 2021.
- [2] Sobanko JF, Dai J, Gelfand JM, Sarwer DB, Percec I. Prospective cohort study investigating changes in body image, quality of life, and self-esteem following minimally invasive cosmetic procedures. Dermatol Surg 2018;44:1121–8.
- [3] Watchmaker LE, Watchmaker JD, Callaghan D, Arndt KA, Dover JS. The unhappy cosmetic patient: lessons from unfavorable online reviews of minimally and noninvasive cosmetic procedures. Dermatol Surg 2020;46:1191–4.
- [4] Korea Consumer Agency. Asymmetry complaints regarding the side effects of plastic surgery (in Korean). Chungbuk: Korea Consumer

- Agency; 2015. Available at: http://www.kca.go.kr/odr/cm/in/osCmRept DataDetW.do. Accessed February 1, 2021.
- [5] Gallup Korea. Appearance and recognition of cosmetic surgery 1994/ 2004/2015/2020 compare (in Korean). Gallup Korea; 2020. Available at: https://www.gallup.co.kr/gallupdb/reportContent.asp?seqNo=1097. Accessed February 1, 2021.
- [6] Lusted MA. Cosmetic Surgery. Edina, MN: ABDO Publications; 2010.
- [7] Suissa AJ. Addiction to cosmetic surgery: representations and medicalization of the body. Int J Ment Health Addict 2008;6:619–30.
- [8] Boulton TN, Malacrida C. Women and cosmetic breast surgery: weighing the medical, social, and lifestyle risks. Qual Health Res 2012;22:511–23.
- [9] NECA. Determine the status of cosmetic plastic procedure and the development of information booklet for the users (in Korean). Seoul: National Evidence-Based Healthcare Collaborating Agency; 2014. Available at: http://www.neca.re.kr/center/researcher/report_view.jsp? boardNo=GA&seq=134&q=626f6172644e6f3d4741. Accessed February 1, 2021.
- [10] Lyoo IK. The Prevalence of Diet and Cosmetic Surgery and Influences on Health in College Female Students [research report] (in Korean). Gwacheon, South Korea: Ministry of Health and Welfare; 2003. Report No.: govp1200410182.
- [11] Kim KY. Rechtliche Schutz für ästhetisch-plastische operationen und gesetzgeberische Überlegungen: Im Hinblick auf AsthOpG in Osterreich. kaml 2015;23:143–68. (in Korean).
- [12] Lee K, Lim HS, Chang KS. Status of perceptions for appearance and cosmetic surgery among university freshmen. Dongguk J Med 2006; 13:27–36. (in Korean).
- [13] Rosenstock IM. Historical origins of the health belief model. Health Educ Monogr 1974;2:328–35.
- [14] Ferrer RA, Klein WMP. Risk perceptions and health behavior. Curr Opin Psychol 2015;5:85–9.
- [15] Seo YA, Chung HC, Kim YA. Experience and acceptance of cosmetic procedures among South Korean women in their 20s. Aesthetic Plast Surg 2019;43:531–8.
- [16] Xie Y, Brenner MJ, Sand JP, et al. Adverse events in facial plastic surgery: data-driven insights into systems, standards, and self-assessment. Am J Otolaryngol 2021;42:102792.
- [17] Shauver MJ, Chung KC. A guide to qualitative research in plastic surgery. Plast Reconstr Surg 2010;126:1089–97.
- [18] Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res 2005;15:1277–88.
- [19] AlShamlan NA, AlOmar RS, Al-Sahow AZ, et al. Cosmetic surgeries and procedures among youth in Saudi Arabia: A cross-sectional study of undergraduate university students in the Eastern Province. Postgrad Med J. 2021. Available at: https://doi.org/10.1136/postgradmedj-2020-139618. Accessed February 2021 [Epub ahead of print].
- [20] Kasmaei P, Farhadi Hassankiade R, Karimy M, Kazemi S, Morsali F, Nasollahzadeh S. Role of attitude, body image, satisfaction and sociodemographic variables in cosmetic surgeries of Iranian students. World J Plast Surg 2020;9:186–93.
- [21] Kalandar A, Al-Youha S, Al-Halabi B, Williams J. What does the public think? Examining plastic surgery perceptions through the Twitterverse. Plast Reconstr Surg 2018;142:265–74.
- [22] Fu R, Chang MM, Chen M, Rohde CH. A qualitative study of breast reconstruction decision-making among Asian immigrant women living in the United States. Plast Reconstr Surg 2017;139:360e–8e.
- [23] Redaelli A, Siddiqui Syed S, Liu X, et al. Two multinational, observational surveys investigating perceptions of beauty and attitudes and experiences relating to aesthetic medical procedures. J Cosmet Dermatol 2020;19:3020–31.
- [24] Steve AK, Temple-Oberle C, Yeung JK, Lafreniere AS, Harrop AR. 'You Helped Create This, Help Me Now': a qualitative analysis of patients' concerns about breast implants and a proposed strategy for moving forward. Plast Reconstr Surg 2021;147:16e–24e.
- [25] Branford OA, Kamali P, Rohrich RJ, et al. #PlasticSurgery. Plast Reconstr Surg 2016;138:1354–65.
- [26] Greywal T, Dayan SH, Goldie K, Guillen Fabi S. The perception bias of aesthetic providers. J Cosmet Dermatol 2021;20:1618–21.