INTRODUCTION

Cosmetic (aesthetic) surgery is an operation, or an invasive medical procedure, done to enhance an individual’s physical appearance.1–3 Furthermore, the main aim of such operations is to make the patient feel more satisfied and confident with their physical appearance.4,5,8,9 According to the American Society of Plastic Surgeons, the most frequent cosmetic procedures are augmentation mammoplasty, mastopexy, Botox injections, and abdominoplasty.6,7

Over the past 20 years, the number of cosmetic procedures has been increasing globally.6,7 In 2018 alone, almost 18 million individuals underwent cosmetic procedures in the United States.6,7 Furthermore, the motives behind undergoing cosmetic surgery are various, including (but not limited to) desire for youthful physical appearance, attractive look, and psychosocial well-being.4,5,8,9

Patients have a variety of factors that influence their decision when choosing which surgeon to perform their operation.10–14 In a study conducted by Galanis et al,10 they found that the most important factors in selecting a surgeon were the surgeon’s qualifications and hospital’s reputation. Moreover, in another study conducted in the Netherlands by Marsidi et al,11 they found that the most important factor influencing the patients’ decision was the surgeon’s experience. Understanding the factors that influence the patients’ selection is crucial for aesthetic surgeons to better promote themselves and their medical practice to the public, and for aspiring aesthetic surgeons to plan out their future careers based on the desires of their patients.
The current literature needs a large and comprehensive study that investigates the determining factors for selecting an aesthetic surgeon. Therefore, this study aimed to fill the previously mentioned gap by conducting a considerably sizable, nationwide study in Saudi Arabia.

**METHODOLOGY**

In this cross-sectional study, the questionnaire used was structured in the light of the available literature with a similarity of the objectives previously proposed. Furthermore, to ensure the questionnaire’s quality and objectivity, two academic plastic surgeons revised and edited the questionnaire.

The contents of the questionnaire were translated by an expert into Arabic, considering that the target of this study is the general Saudi population. Questions designed to be the determinants of cosmetic surgeon selection included the significance of board certification, social media fame, reputation, manner, qualifications, academic research or teaching activities, age, gender, hospital/clinic they work in, and their service prices. Furthermore, a five-point Likert scale was applied to these questions to rate a respondent’s preference for each of the aforementioned factors.

The questionnaire was uploaded to Google Forms and then distributed online via 80 trained data collectors from different regions of the Kingdom of Saudi Arabia. The study’s data were collected from September 21 to October 29, 2021 through social media applications, namely, WhatsApp groups, Facebook groups, Twitter, Instagram, and LinkedIn. Moreover, all participants were notified that all their responses would remain anonymous and confidential.

The single criterion for selecting respondents was having an established interest in undergoing cosmetic surgery or having undergone cosmetic surgery in the past. Thus, those who did not express their interest in undergoing cosmetic surgery in the future or who had not undergone cosmetic surgery in the past were excluded. Additionally, those aged younger than 18 years were also excluded. Also, uncompleted responses were excluded.

**STATISTICAL ANALYSIS**

The data was gathered, cleaned (according to the exclusion and inclusion criteria), and coded in MS Excel software, then transported to SPSS for data analysis. Descriptive statistics were used to describe the overall group of respondents. Between comparisons, independent sample t-tests were applied. A P value of 0.05 was used to indicate statistical significance. All data analyses were performed using the Statistical Package for Social Sciences, version 26 (SPSS, Armonk, NY: IBM Corp).

**RESULTS**

This study included a total of 7190 participants from all regions of Saudi Arabia. The most common age group was 18–25 years old, and 81.3% of the participants were women. In regard to marital status, 61.5% were single and 34.7% were married. As to educational attainment, the majority of the respondents were bachelor’s degree holders (63.6%), more than half were still studying (51.1%), and the rest were currently employed (29.2%). Moreover, 32.8% of the participants had children. Regarding the participants’ area of residence, those living in the western region constituted 30.8%, while those living in the central region were only 27.5%. Moreover, 31.6% reported household earning of 10,000–20,000 Saudi Arabian Riyal (SAR) per month, 28.5% reported an earning of 5000–10,000 SAR, and 26.4% had an earning of more than 20,000 SAR per month. The proportion of respondents who had a previous history of cosmetic surgery was only 11.7%, while those who were planning to have cosmetic surgery in the future made up 51.3% of the total respondents. Further sociodemographic details of the participants are presented in Table 1.

Furthermore, it can be observed that the most influential factor for choosing a cosmetic surgeon was the surgeons’ qualifications (39.9%), followed by a recommendation from friends or relatives (24%), while the number of social media followers was the least influential factor (0.8%). We then asked the participants to rate their most preferred cosmetic surgeon; we found that the most preferred surgeon was a surgeon with international board certification (mean score, 4.17), followed by a surgeon recommended by friends or relatives (mean score, 3.78), followed by a surgeon with an active academic research portfolio (mean score, 3.68). A social-media famous surgeon was the least preferred (mean score, 2.4). The previously mentioned results are demonstrated in Figures 1 and 2.

Moreover, the older age groups (>25 years) agreed that their surgeon preference was significantly influenced by international board certification (P < 0.001), friends and relatives’ advice (P = 0.002), the surgeon’s manner (P < 0.001), research academic activities (P < 0.001), his or her age (P < 0.001), being a female physician (P = 0.002), prices (P < 0.001), and being a faculty member...
in an academic institution \((P < 0.001)\). However, the younger age groups \((≤25 \text{ years})\) significantly decided that their choice of cosmetic surgeon was based on a social media personality \((P = 0.017)\) and qualifications \((P = 0.025)\). More details are presented in Tables 2 and 3.

In addition, men significantly agreed on their preference of the aesthetic surgeon based on local board certification \((P = 0.004)\), age \((P < 0.001)\), male physician \((P < 0.001)\), workplace \((P < 0.001)\), prices \((P < 0.001)\), and being a faculty member in an academic institution \((P < 0.001)\). On the other hand, female participants preferred a cosmetic surgeon with a social media personality \((P < 0.001)\), based on advice from friends and relatives \((P = 0.023)\), and being a female physician.

Furthermore, educated participants were more associated with choosing an internationally board-certified surgeon \((P < 0.001)\) and were influenced by advice from friends and relatives \((P = 0.050)\), the surgeon’s manner \((P = 0.012)\), age \((P < 0.001)\), and being a male physician \((P < 0.001)\). However, female cosmetic surgeons \((P < 0.001)\) were significantly more preferred by high school students or participants with a lower academic attainment. More details are presented in Table 4.

### DISCUSSION

This research is a nationwide study conducted among the population of Saudi Arabia. The authors of this study aim to detail the factors that make an aesthetic surgeon attractive to patients. This study showed that the most influential factor for selecting an aesthetic surgeon is their qualifications. This goes in line with previously published studies as the surgeons’ qualifications were well established to be of an importance for the patient’s selection of their surgeon.\(^{10,12,14}\) However, this result contradicts a previously published study that was conducted in the Netherlands, as Marsidi et al\(^{11}\) claimed that the most important factor is the surgeons’ experience.

This study also revealed that the most favorable surgeon for Saudi Arabian patients is a surgeon with international board certification. The meaning of international board certification is to train outside of the

---

**Table 1. Socio-demographic Characteristics of Participants**

| Variable                        | N (%) |
|--------------------------------|-------|
| Age group, y                   |       |
| • 8–25                         | 4197 (58.4) |
| • 26–35                        | 1132 (15.7) |
| • 36–50                        | 1486 (20.7) |
| • 51–65                        | 375 (05.2)  |
| Gender                         |       |
| • Male                         | 1341 (18.7) |
| • Female                       | 5849 (81.3) |
| Marital status                 |       |
| • Single                       | 4428 (61.5) |
| • Married                      | 2492 (34.7) |
| • Divorced or separated        | 213 (03.0)  |
| • Widowed                      | 57 (0.80)   |
| Educational level              |       |
| • Below high school            | 86 (01.2)   |
| • High school                  | 2092 (28.2) |
| • Bachelor’s degree            | 4573 (63.6) |
| • Master’s degree              | 385 (05.4)  |
| • Doctorate degree             | 117 (01.6)  |
| Occupational status            |       |
| • Student                      | 3679 (51.1) |
| • Employed                     | 2096 (29.2) |
| • Unemployed                   | 996 (13.9)  |
| • Other                        | 419 (05.8)   |
| Having children                |       |
| • Yes                          | 2361 (32.8) |
| • No                           | 4829 (67.2) |
| Region of residence            |       |
| • Central                      | 1986 (27.5) |
| • Western                      | 2214 (30.8) |
| • Eastern                      | 1183 (16.5) |
| • Northern                     | 306 (04.3)  |
| • Southern                     | 1501 (20.9) |
| Household income (SAR)         |       |
| • ≤5000                        | 977 (13.5)  |
| • 5000–10,000                  | 2049 (28.5) |
| • 10,001–20,000                | 2269 (31.6) |
| • >20,000                      | 1895 (26.4) |
| Do you consider having cosmetic surgery done in the future? | |
| • Yes                          | 3688 (51.3) |
| • No                           | 3502 (48.7) |

---

**Fig. 1.** Most important factor for choosing a cosmetic surgeon.
original country where the patient resides. In Saudi Arabia, training abroad in well-established residency programs, such as North American residency programs, is a common trend among the Saudi Arabian medical graduates. Saudi Arabian plastic surgeons returning to their home country after finishing their training abroad are identified as internationally trained surgeons. The aforementioned fact may not be applicable to other countries, such as the United States, as most, if not all, of their medical graduates train in their home country; thus, our finding could only be limited to the Saudi Arabian population.

The reason why our cohort finds the internationally trained surgeons attractive could be due to a belief that being an internationally trained surgeon increases the surgeon’s competency, primarily because international board-certified surgeons will be able to see different techniques

### Table 2. Differences in Surgeon Preference according to Age Group (n = 7190)

| Preferred Cosmetic Surgeon | Age Group | Mean ± SD | P* |
|----------------------------|-----------|-----------|----|
|                             | ≤25 y, Mean ± SD | >25 y, Mean ± SD |    |
| Social media personality    | 2.43 ± 1.22 | 2.36 ± 1.31 | 0.017† |
| Local board certified       | 3.31 ± 1.13 | 3.36 ± 1.29 | 0.053 |
| International board certified | 4.13 ± 1.01 | 4.27 ± 1.06 | <0.001† |
| Based on research activities | 5.74 ± 1.16 | 5.83 ± 1.23 | 0.002† |
| Local board certified       | 3.11 ± 1.29 | 3.45 ± 1.31 | <0.001† |
| Based on his/her qualifications | 4.50 ± 0.87 | 4.45 ± 0.93 | 0.025† |
| Based on research activities | 5.52 ± 1.21 | 5.89 ± 1.17 | <0.001† |
| Based on his/her age        | 2.57 ± 1.24 | 3.09 ± 1.29 | <0.001† |
| Female physician            | 2.87 ± 1.36 | 2.93 ± 1.16 | 0.002† |
| Male physician              | 2.99 ± 1.16 | 3.42 ± 1.37 | <0.001† |
| Based on hospital/clinic they work | 3.46 ± 1.21 | 3.51 ± 1.24 | 0.062 |
| Based on prices             | 3.34 ± 1.24 | 3.51 ± 1.24 | 0.062 |
| Teaching faculty member     | 2.66 ± 1.13 | 2.97 ± 1.25 | 0.001† |

Response has a range from 1 (strongly disagree) to 5 (strongly agree). The values in boldface have a significant P value < 0.05. *P has been calculated using independent sample t test. †Significant at P < 0.05 level.

### Table 3. Differences in Surgeon Preference according to Gender (n = 7190)

| Preferred Cosmetic Surgeon | Gender | Mean ± SD | P* |
|----------------------------|--------|-----------|----|
| Social media personality   | Men, Mean ± SD | Women, Mean ± SD |    |
| International board certified | 4.18 ± 1.03 | 4.19 ± 1.04 | 0.764 |
| Based on research activities | 3.71 ± 1.19 | 3.80 ± 1.19 | 0.023† |
| Based on his/her manner    | 3.30 ± 1.19 | 3.24 ± 1.33 | 0.100 |
| Based on his/her qualifications | 4.45 ± 0.91 | 4.48 ± 0.89 | 0.246 |
| Based on research activities | 3.71 ± 1.17 | 3.67 ± 1.21 | 0.105 |
| Based on his/her age       | 3.02 ± 1.26 | 2.73 ± 1.29 | <0.001† |
| Female physician           | 2.65 ± 1.18 | 2.99 ± 1.28 | <0.001† |
| Male physician             | 3.49 ± 1.21 | 3.00 ± 1.27 | <0.001† |
| Based on hospital/clinic they work | 3.60 ± 1.14 | 3.45 ± 1.24 | <0.001† |
| Based on prices            | 3.53 ± 1.21 | 3.38 ± 1.25 | <0.001† |
| Teaching faculty member    | 3.00 ± 1.14 | 2.74 ± 1.19 | <0.001† |

Response has a range from 1 (strongly disagree) to 5 (strongly agree). The values in boldface have a significant P value < 0.05. *P has been calculated using independent sample t test. †Significant at P < 0.05 level.
and be more exposed to world-renowned pioneers in the field of plastic surgery. Furthermore, Yahanda et al. demonstrated in their systematic review and meta-analysis that the high competency of a surgeon is the most valued trait in surgeons, and this may be reflected to patients by the international training of the surgeon.

Moreover, the educated and the older population in our cohort preferred an internationally board-certified surgeon, while the female population preferred a social-media personality surgeon. Since most of the participants are women, the authors hypothesize that the reason behind the female population preferring a plastic surgeon with a social-media personality could be related to more social-media use by the patients, thus, being more familiar with certain plastic surgeons who are more known in social media compared with the surgeons without social media personalities.

The authors present several recommendations for aspiring Saudi Arabian cosmetic surgeons and current Saudi Arabian cosmetic surgeons based on the data presented in this study. First, it is clear in this study that an internationally trained surgeon is highly attractive to Saudi Arabian patients, thus, considering traveling abroad to world-renowned institutions to sharpen surgical skills is recommended. Second, the female population prefers a surgeon with a social-media personality. Therefore, considering being involved in social media platforms, such as Instagram, Twitter, and YouTube, is recommended. Third, possessing high qualifications as a surgeon is of extreme importance. Hence, an aspiring cosmetic surgeon must be sure to be highly qualified to be preferred by patients.

Furthermore, this study has several limitations that must be mentioned. First, a convenience sampling technique was used instead of random sampling. Second, the study's descriptive cross-sectional nature with the probability of bias is a limitation. Third, the population of our study is from one country (Saudi Arabia), which makes it difficult to generalize the results to international populations. Finally, more than 50% of the population are within a certain age group (18–25 years). This could be due to the data-collecting method, which was via social media applications. Moreover, conducting studies which eliminate the limitations is highly recommended by the authors.

**CONCLUSIONS**

This study showed that the surgeon’s qualifications were the most common factor for choosing a cosmetic surgeon before operation. It is crucial for current Saudi Arabian aesthetic surgeons and aspiring Saudi Arabian cosmetic surgeons to be well-qualified to attract patients. Furthermore, it was clearly demonstrated that an internationally board-certified surgeon is the most preferred surgeon. Thus, traveling abroad to world-renowned institutions to enhance surgical skills is recommended.