

# ORIGINAL ARTICLE

# Nationwide Study: Public Adults' Perception of Cosmetic Surgery in Saudi Arabia

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**Background:** Knowing what influences people to pursue cosmetic surgery can aid current and aspiring cosmetic surgeons as they develop their techniques and enhance their market practice. This study aimed to evaluate Saudi adults' perceptions of cosmetic surgery using the three subscales of the Acceptance of Cosmetic Surgery Scale, namely Social, Consider, and Intrapersonal.

**Methods:** This cross-sectional, nationwide study involved members of the public from all provinces of Saudi Arabia. The inclusion criteria were being a Saudi resident over 18 years old and consenting to participate; those who did not meet the criteria were excluded. The study was implemented between October 25 and December 16, 2022. The electronic survey was composed of a demographic characteristics section and a previously constructed questionnaire modified for Arabic speakers to assess the population's perceptions of cosmetic surgery. Statistical analysis was conducted using the SPSS 22 statistical package.

**Results:** Of the 8006 Saudi adults who participated in the study, 5551 (69.3%) were women, and 2245 (30.7%) were men. We found that intrapersonal factors were the primary motivator, followed by factors addressed by the Consider and Social subscales. However, attitudes differed by gender, age, and other demographic characteristics: men and younger individuals (18–29) showed the lowest score for likelihood to pursue cosmetic surgery, whereas women and older individuals (40–50) ranked the highest on total scale scores. Overall, the Saudi adult population showed diminished perceptions of cosmetic surgery nationwide.

**Conclusion:** The results confirmed the authors' hypothesis that there is a diminished perception of cosmetic surgery among adults in Saudi Arabia. (*Plast Reconstr Surg Glob Open 2023; 11:e5500; doi: 10.1097/GOX.00000000005500; Published online 19 December 2023.*)

# **INTRODUCTION**

Cosmetic surgery is a type of surgery with the main outcome of changing one's appearance and aesthetics. The

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Copyright © 2023 The Authors. Published by Wolters Kluwer Health, Inc. on behalf of The American Society of Plastic Surgeons. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal. DOI: 10.1097/GOX.00000000005500 International Society of Aesthetic Plastic Surgery published the findings of its yearly Global Survey on Aesthetic/ Cosmetic Procedures. The report reveals a 19.3% overall rise in procedures conducted by plastic surgeons in 2021. This encompasses over 12.8 million surgical procedures and approximately 17.5 million nonsurgical procedures carried out on a global scale.<sup>1</sup> However, despite the tremendous number of advancements in the field of plastic surgery, it appears that the general public has limited knowledge of the scope of plastic surgery, especially cosmetic surgery.<sup>2</sup>

The Acceptance of Cosmetic Surgery Scale (ACSS; Henderson-King & Henderson-King, 2005) is used to measure the acceptance of cosmetic surgery.<sup>3</sup> The scale comprises three subscales, namely the Intrapersonal, Consider, and Social subscales, which present a mixture of contributing factors that motivate people to undergo cosmetic surgery.<sup>4</sup> Previous studies have shown that attitudes toward cosmetic surgery vary depending on factors such as age, gender, marital status, education, and income. For instance, Morait et al<sup>5</sup> found that on a sample size of 389,

Disclosure statements are at the end of this article, following the correspondence information.

47.6% were open to having some minor cosmetic procedures in Riyadh, Saudi Arabia, whereas 37.1% were against doing so. Furthermore, Tam et al<sup>6</sup> found that inadequate self-esteem was one of the top three factors by which cosmetic surgery patients are stereotypically represented in three different cultures.

The primary purpose of the current study was to elucidate the attitudes pertaining to cosmetic surgery procedures among Saudi adults by determining which factors most strongly influence people's perceptions, while linking and considering demographic data such as, age, gender, marital status, and variations in education and income. To our knowledge, this is the first study to involve all regions of Saudi Arabia and measure all these factors at once using the ACSS-validated scale.

#### **MATERIALS AND METHODS**

Ethical clearance was provided by the institutional review board at King Saud University (institutional review boards project NO. 22/0821/IRB). This crosssectional study aimed to investigate the insight of cosmetic surgery among Saudi men and women aged 18–60 years who had internet access and social media accounts. The survey was conducted over 3 weeks (November 25 to December 16, 2022) using various social media platforms, including WhatsApp, Telegram, Twitter, and Facebook. The inclusion criteria for the study were individuals who consented to participate in the study and met the age and internet access requirements. Children, defined as younger than 18 years old, were excluded from the study.

#### **Data Collection**

Data were collected using a 24-question questionnaire that covered three domains. The first domain focused on obtaining participants' consent, whereas the second domain was dedicated to demographics and included eight items: gender, age, educational level, nationality, regional residence, marital status, affiliation, and average income. The last domain was a validated questionnaire called the ACSS, which consisted of 15 items divided into three subscales: Social, Intrapersonal, and Consider. Each subscale contained five closed-ended questions that resembled those of a Likert scale, which is a bipolar scaling method varying from "strongly agree," "agree a little," "neutral," "disagree a little," and "strongly disagree" in the answer form. The ACSS was chosen by the authors based on available literature and the study's objectives.<sup>4</sup>

#### Questionnaire

The survey was translated into Arabic and administered after consent from the authors of a previously published article to ensure that the public could comprehend the written questions.<sup>5</sup> The data were translated back to English for statistical analysis. To prevent duplicate responses, IP addresses were required in the survey. Respondents and data collectors did not receive any financial encouragement for their participation. The online survey was distributed through Google

#### Takeaways

**Question:** What are the perception-influencing factors of cosmetic surgery among Saudi adults?

**Findings:** This cross-sectional study shows that the perception and acceptance of cosmetic surgery are affected by interpersonal factors more so than social causes.

**Meaning:** The general population of Saudi Arabia has a diminished acceptance of cosmetic surgery.

Forms, which provided a well-secured and anonymized way of gathering data while ensuring respondent confidentiality.

# STATISTICAL ANALYSIS

Data were extracted, coded, and analyzed using the Statistical Package for Social Sciences, version 25 on Mac, with a 95% confidence interval. A *P* value of 0.05 was considered statistically significant, and was used for all tests. Kruskal–Wallis tests were used to analyze the correlation between qualitative and quantitative variables, and Cronbach alpha was used to measure the internal consistency of the ACSS items, with a value of more than 0.75 deemed acceptable. In addition, percentiles, SD, and mean values were calculated.

# **RESULTS**

#### **Demographic Data of the Participants**

A total of 8006 participants, collected from four regions of Saudi Arabia (northern, southern, eastern, and western regions) with the aid of more than 200 trained data collectors, have joined this study and completed the questionnaire. Of the participants, 5551 (69.3%) were women, 2455 (30.7%) were men, and 4873 (60.9%) were aged between 18 and 28 years. Most participants (69%) held a university degree, whereas only eight (0.1%) were illiterate. Details about the demographic characteristics of this cohort are reported in Table 1.

#### Questionnaire Responses to ACSS

Regarding the ACSS, the largest number of participants (37%) strongly disagreed with item 13: "I would seriously consider having cosmetic surgery, if I thought my partner would find me more attractive." However, a smaller number (20.2%) agreed somewhat with item 1: "It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look." Almost a quarter of participants (24.1%) agreed somewhat with item 2: "Cosmetic surgery is a good thing because it can help people feel better about themselves." Furthermore, 22.2% of participants agreed a little with item 14: "Cosmetic surgery can be a big benefit to people's self-image." Conversely, a sizable number of participants (29.5%) strongly agreed with item 10: "I would never have any kind of plastic surgery." For further details, please refer to Table 2.

Table 1. Sociodemographic Data of the	e Participants
(n = 8006)	

Characteristics	No.	%
Sex		
Male	2455	30.7
Female	5551	69.3
Age		
18–28	4873	60.9
29–39	1303	16.3
40-50	1230	15.4
51-61	510	6.4
More than 61	90	1.1
Nationality		
Saudi	7374	92.1
Non-Saudi	632	7.9
Educational level		
Illiterate	8	0.1
Elementary school	34	0.4
High school degree	1422	17.8
Diploma	372	4.6
University degree	5527	69
Master's degree	480	6
PhD	163	2
Region		
Western province	2689	33.6
Central province	1901	23.7
Southern province	949	11.9
Eastern province	454	5.7
Northern province	444	5.5
Marital status		
Single	4787	59.8
Married	2950	36.8
Divorced	197	2.5
Widowed	72	0.9
Occupation		
Student	3683	46
Employee	2592	32.4
Freelancer	210	2.6
Unemployed	1183	14.8
Retired	338	4.2
Monthly income in Saudi riyals		
Less than 5000 SR	4640	58
5000–10,000 SR	1461	18.2
10,000–20,000 SR	1388	17.3
More than 20,000 SR	517	6.5

#### Attitudes toward Cosmetic Surgery

Item 2 had the highest mean value on the scale  $(5.09 \pm 1.71)$ , which is extremely valuable for the Intrapersonal subscale. Item 11, "I would think about having cosmetic surgery to keep looking young," had the lowest mean value  $(3.23 \pm 2.11)$ . The Intrapersonal scale carried the highest mean  $(22.12 \pm 8.16)$ , followed by the Consider scale  $(19.72 \pm 7.13)$ ; the Social scale had the lowest mean  $(17.27 \pm 9.33)$ . Strong Cronbach alpha values (0.80-0.95) were found for every ACSS subscale score, which indicates that every ACSS subscale score had excellent internal consistency and accuracy; for further details, please refer to Table 3.

In addition to the descriptive statistics of the ACSS, Table 4 illustrates the association between the ACSS subscales and the sociodemographic data of the participants based on the results of the Kruskall-Wallis test. Male participants scored higher than female participants on the Social scale (Kruskal–Wallis test; P = 0.001), whereas the converse is true for the Consider scale, on which female participants scored much higher (Kruskal-Wallis test; P < 0.001). Furthermore, participants between the ages of 40 and 61 scored higher on the Social scale than the 18-28 age group on the Consider scale (Kruskal-Wallis test; P < 0.001). There were no statistically significant correlations between nationality and ACSS subscale scores, with the exception of the Intrapersonal scale and Saudi nationality (Kruskal–Wallis test; P = 0.019). Participants with an elementary school education level scored significantly higher on the Social scale, whereas those who were illiterate and those who held university degrees, respectively, scored the lowest on the Intrapersonal and Consider scales (Kruskal–Wallis test; P < 0.001). Moreover, the responses drawn from the northern and western provinces had the highest and lowest mean ranks, respectively, on the Social scale compared with the rest of the provinces (Kruskal-Wallis test; P < 0.001). The mean rank on the Social scale was also highest for divorced people and lowest for single people (Kruskal–Wallis test; P < 0.001). While those working as freelancers and those earning between 10,000 and 20,000 Saudi riyal (SR) per month scored the highest on the Social scale, students and people earning less than 5000 SR or more than 20,000 SR per month scored the lowest on the same scale (Kruskal–Wallis test, P < 0.001).

#### DISCUSSION

The present study aimed to assess the acceptance of cosmetic surgery among adults in Saudi Arabia by using the validated ACSS. In a sample of 8006 adult participants in Saudi Arabia, we used the Intrapersonal, Social, and Consider subscales to investigate factors that affect participants' perceptions of aesthetic surgical procedures. Although some studies have been conducted on the acceptance rate of aesthetic surgery in specific regions of Saudi Arabia, no national studies have involved all regions of Saudi Arabia with the use of ACSS to measure the acceptance rate.

The main finding of this study is that almost all items on the Intrapersonal subscale had the highest mean scale scores compared with the Social and Consider subscales, with one of the Intrapersonal scale items having the highest score of all 15 ACSS questions. The highest total score for acceptance of aesthetic surgery occurred among those who were divorced, women, and in their 40s and 50s. Although the acceptance rate among those groups is high compared with others, we suspect that they may accept aesthetic surgical procedures but are not planning to have them done. Most cosmetic patients in Riyadh and Jeddah in 2016 were 20 to 40 years of age.<sup>7</sup>

When measuring the acceptance of plastic surgery among the Saudi population, the Intrapersonal and Social subscales had the highest and lowest mean scores for acceptance, respectively. These findings are similar to those among the Serbian population.<sup>4</sup> Conversely, in a study conducted in Malaysia using the same scale, Swami

Table 2. Questionnaire Responses to ACSS (n = 8006)

Scale Item	Strongly Disagree	Disagree Somewhat	Disagree a Little	Neutral	Agree a Little	Agree Somewhat	Strongly Agree
1. It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look.	1217 (15.2%)	642 (8%)	624 (7.8%)	1305 (16.3%)	1294 (16.2%)	1614 (20.2%)	1310 (16.4%)
2. Cosmetic surgery is a good thing because it can help people feel better about themselves.	510 (6.4%)	333 (4.2%)	389 (4.9%)	1210 (15.1%)	1727 (21.6%)	1929 (24.1%)	1908 (23.8%)
3. In the future, I could end up having some kind of cosmetic surgery.	2162 (27%)	657 (8.2%)	582 (7.3%)	1228 (15.3%)	1280 (16%)	1092 (13.6%)	1005 (12.6%)
<ol> <li>People who are very unhappy with their physical appearance should consider cosmetic surgery as one option.</li> </ol>	1599 (20%)	701 (8.8%)	810 (10.1%)	1444 (18%)	1401 (17.5%)	1082 (13.5%)	969 (12.1%)
<ol> <li>If cosmetic surgery can make someone happier with the way they look, then they should try it.</li> </ol>	1753 (21.9%)	614 (7.7%)	766 (9.6%)	1301 (16.3%)	1381 (17.2%)	1062 (13.3%)	1129 (14.1%)
6. If I could have a surgical procedure done for free, I would consider trying cosmetic surgery.	2661 (33.2%)	612 (7.6%)	704 (8.8%)	1511 (14.4%)	882 (11%)	826 (10.3%)	1170 (14.6%)
<ol> <li>If I knew there would be no negative side effects or pain, I would like to try cosmetic surgery.</li> </ol>	2118 (26.5%)	519 (6.5%)	540 (6.7%)	1007 (12.6%)	1095 (13.7%)	968 (12.1%)	1759 (22%)
8. I have sometimes thought about having cosmetic surgery.	2411 (30.1%)	543 (6.8%)	582 (7.3%)	911 (11.4%)	1281 (16%)	1084 (13.5%)	1194 (14.9%)
9. I would seriously consider having cosmetic surgery, if my partner thought it was a good idea.	2631 (32.9%)	593 (7.4%)	705 (8.8%)	1369 (17.1%)	896 (11.2%)	835 (10.4%)	977 (12.2%)
10. I would never have any kind of plastic surgery.	750 (9.4%)	619 (7.7%)	829 (10.4%)	1978 (24.7%)	665 (8.3%)	807 (10.1%)	2358 (29.5%)
11. I would think about having cosmetic surgery to keep looking young.	2909 (36.3%)	667 (8.3%)	758 (9.5%)	1227 (15.3%)	947 (11.8%)	763 (9.5%)	735 (9.2%)
12. If it would benefit my career, I would think about having plastic surgery.	2340 (29.2%)	519 (6.5%)	606 (7.6%)	1280 (16%)	1186 (14.8%)	912 (11.4%)	1163 (14.5%)
<ol> <li>I would seriously consider having cosmetic surgery, if I thought my partner would find me more attractive.</li> </ol>	2963 (37%)	522 (6.5%)	617 (7.7%)	1138 (14.2%)	993 (12.4%)	830 (10.4%)	943 (11.8%)
14. Cosmetic surgery can be a big benefit to people's self-image.	965 (12.1%)	317 (4%)	356 (4.4%)	1251 (15.6%)	1780 (22.2%)	1634 (20.4%)	1703 (21.3%)
15. If a simple cosmetic surgery procedure would make me more attractive to others, I would think about trying it.	2735 (34.2%)	549 (6.9%)	653 (8.2%)	1184 (14.8%)	1002 (12.5%)	925 (11.6%)	958 (12%)

found that social factors scored higher than in Western countries and argued that the increased value ascribed to social factors motivates people to pursue cosmetic surgery.<sup>8</sup> The US population showed higher intrapersonal than social reasons for cosmetic surgery, which was not surprising; this increase is justified by the individualist society in which Western women live, enabling them to obscure the influence of social power on their intentions to pursue aesthetic procedures.<sup>3</sup> In contrast, Eastern women can bind their intrapersonal opinions with their social lives, which matter greatly to them. However, according to our study, the Social subscale overall had the lowest mean score, resembling item 11 of the ACSS, which had the lowest mean among all 15 items. A similar study in Riyadh, Saudi Arabia, reported the Social subscale as having the lowest mean.5

An annual survey conducted in 2021 by the International Society of Aesthetic Plastic Surgery showed that of all the cosmetic procedures performed worldwide, 86.1% were done on women.<sup>1</sup> As expected, our findings show that women rank slightly higher than men in accepting cosmetic surgery. Studies conducted in South

Korea, Iran, Brazil, and India showed that women are more interested than men in cosmetic surgery.<sup>9</sup> The Asian Facial Aesthetics Expert Consensus Group premeeting survey showed similar findings regarding aesthetic facial surgery.<sup>10</sup> Liew et al linked this increase to several contributing factors: (a) knowledge and awareness of cosmetic surgery through public figures in the media, (b) the accessibility of cosmetic products, and (c) an increasing number of plastic surgeons.

Although most respondents in the current study were aged from 18 to 28 years, the lowest acceptance rate was among this age group. We believe that the diminished acceptance rate is due to the lack of financial means among the younger age group, as the acceptance rate increased in direct proportion with monthly income until it reached 20,000 SR, at which point the acceptance rate decreased, and the data were statistically significant. Conversely, the age group of 40–50 years had the highest acceptance rate among all age groups, which was unexpected; social factors were the main influence on acceptance in this group.

As most previous studies were done on young people from high school to undergraduate age, there are some

#### Table 3. Descriptive Statistics of ACSS Items (n = 8006)

Scale Item	Mean ± SD	$Cronbach \ \alpha$
1. It makes sense to have minor cosmetic surgery rather than spending years feeling bad about the way you look.	$4.36\pm2.02$	0.930
2. Cosmetic surgery is a good thing because it can help people feel better about themselves.	$5.09 \pm 1.71$	0.933
3. In the future, I could end up having some kind of cosmetic surgery.	$3.76 \pm 2.15$	0.928
4. People who are very unhappy with their physical appearance should consider cosmetic surgery as one option.	$3.93 \pm 2.01$	0.929
5. If cosmetic surgery can make someone happier with the way they look, then they should try it.	$3.95\pm2.08$	0.928
6. If I could have a surgical procedure done for free, I would consider trying cosmetic surgery.	$3.52 \pm 2.23$	0.928
7. If I knew there would be no negative side effects or pain, I would like to try cosmetic surgery.	$4.05 \pm 2.30$	0.927
8. I have sometimes thought about having cosmetic surgery.	$3.77 \pm 2.25$	0.928
9. I would seriously consider having cosmetic surgery, if my partner thought it was a good idea.	$3.46 \pm 2.16$	0.927
10. I would never have any kind of plastic surgery.	$4.63 \pm 2.00$	0.959
11. I would think about having cosmetic surgery to keep looking young.	$3.23\pm2.11$	0.929
12. If it would benefit my career, I would think about having plastic surgery.	$3.73 \pm 2.19$	0.929
13. I would seriously consider having cosmetic surgery, if I thought my partner would find me more attractive.	$3.37 \pm 2.21$	0.928
14. Cosmetic surgery can be a big benefit to people's self-image.	$4.78 \pm 1.91$	0.932
15. If a simple cosmetic surgery procedure would make me more attractive to others, I would think about trying it.	$3.47 \pm 2.20$	0.928
Social scale	$17.27 \pm 9.33$	0.801
Intrapersonal scale	$22.12\pm8.16$	0.829
Consider scale	$19.72\pm7.13$	0.841
Total score	$59.11 \pm 22.92$	0.916

indications that age might influence the acceptance of aesthetic surgery. In a study conducted in the United Kingdom, it was found that the age of participants was inversely correlated with the consideration of cosmetic surgery, which means that younger people have a higher acceptance rate of aesthetic surgery.<sup>11</sup> Additionally, a Chinese study reported that acceptance increases when age increases only in men but not in women.<sup>12</sup> We suggest that there is a generational effect due to exposure to advertisements among those age groups, especially on social networking sites.

A study conducted in Riyadh, Saudi Arabia, concluded that an increase in aesthetic procedures in the preceding years resulted from the use of facial filters on social media platforms.<sup>13</sup> The first nationwide study in Saudi Arabia to evaluate the influence of advertisements reported that participants who viewed cosmetic surgery content on social media had a more negative perception of themselves and were more inclined to think of undergoing cosmetic procedures than their counterparts who did not view cosmetic surgery content.<sup>14</sup>

The influence of religious beliefs on individual attitudes and perceptions is a significant area of exploration in many fields, with cosmetic surgery being no exception. In the context of our research, the prominence of Islam among participants—owing to our demographic focus on Saudi Arabia—offers a rich ground for examining its potential effects. Islamic teachings, grounded in scriptures and traditions, often emphasize values such as humility, modesty, and the prioritization of inner character over external appearance. These teachings could be a substantial factor in shaping the opinions of believers about cosmetic surgery. For instance, a certain reluctance to modify one's appearance for mere aesthetic reasons might be rooted in these very teachings, emphasizing contentment with one's natural form. However, it is equally essential to stress the heterogeneity of opinions and beliefs within the Muslim community. Islam, as practiced across the world, is shaped by myriad cultural, regional, and individual factors, leading to varied interpretations. These differences could explain the wide range of attitudes toward cosmetic surgery within the community. A referenced study in Saudi Arabia<sup>15</sup> provided crucial insights into this discussion. Although there seems to be a general acceptance of surgery for medical reasons or reconstruction, purely cosmetic procedures are viewed with more skepticism. About 60% of participants were against purely aesthetic surgery, yet 88% could clearly differentiate between reconstructive and cosmetic procedures. This distinction indicates a nuanced understanding rather than a blanket opposition. Considering this diversity of views, it becomes evident that a holistic understanding of attitudes toward cosmetic surgery cannot be obtained without diving deeper into the intersections of religion, culture, and individual beliefs. It would be particularly instructive for future research to focus on various subgroups within the Muslim community, analyzing how regional, sectarian, and cultural differences might play into these perceptions.

Our study results confirmed our primary hypothesis that the attitude toward cosmetic surgery among Saudi Arabian adults is diminished. Furthermore, this study is limited in its cross-sectional characteristic, closed-ended questionnaire, measuring of the perception on a single cut point of time, and having many questions in the questionnaire that could lead to possible random response bias. One potential limitation of our study is the high percentage of young respondents. Given that attitudes toward cosmetic surgery may vary across different age groups, the overrepresentation of young individuals in

Table 4. Analysis of the Acceptance of Co	osmetic Surgery among the S	audi Population (Mean Rank)
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Characteristics	Intrapersonal Scale	Social Scale	Consider Scale	Total Score
Sex				
Male	3956.49	4134.94	3852.04	3991.06
Female	4024.29	3945.37	4070.49	4009
Р	0.226	0.001	< 0.001	0.749
Age				
18–28	3583.79	3477.41	3613.74	3521.05
29–39	4376.24	4505.63	4401.74	4464.19
40-50	4932.12	5174.65	4911.15	5087.36
51-61	4730.08	4836.03	4527.56	4759.53
More than 61	4523.29	4495.5	3966.87	4358.66
Р	< 0.001	< 0.001	< 0.001	< 0.001
Nationality				
Saudi	4013.76	4021.15	4017.62	4018.93
Non-Saudi	3883.79	3797.54	3838.74	3823.41
Р	0.019	0.175	0.061	0.041
Educational level				
Illiterate	3505.88	4508.25	4391.19	4170.94
Elementary school	5047.59	5386.78	5102.71	5258.18
High school degree	3789.13	3806.7	3834.48	3791.56
Diploma	4233.09	4521.57	4331.56	4394.15
University degree	3967.32	3940.37	3972.9	3957.25
Master degree	4616.92	4614.5	4377.4	4576.59
PhD	4576.57	4566.02	4417.38	4571.55
P	< 0.001	< 0.001	< 0.001	< 0.001
Region				
Western province	3691.03	3639.69	3692.05	3663.71
Central province	3656.32	3672.38	3655.36	3653.26
Southern province	4060.43	4162.88	4048.14	4121.86
Eastern province	3949.65	3904.76	3902.49	3927.91
Northern province	4163.66	4403.12	4372.53	4348.23
P	< 0.001	< 0.001	< 0.001	< 0.001
Marital status				
Single	3589.01	3481.7	3615.73	3524.74
Married	4627.43	4777.91	4579.9	4717.26
Divorced	4618.33	4887.67	4650.14	4782.82
Widowed	4315.28	4546.99	4399.26	4457.87
Р	< 0.001	< 0.001	< 0.001	< 0.001
Occupation				
Student	3441.18	3330.21	3478.08	3366.46
Employee	4668.1	4745.08	4612.32	4730.3
Freelancer	4687.04	4871.35	4613.39	4793.7
Unemployed	3996.79	4115.54	4048.93	4072.76
Retired	4632.97	4721.72	4395.99	4638.07
Р	< 0.001	< 0.001	< 0.001	< 0.001
Monthly income in Saudi riyals				
Less than 5000 SR	3630.11	3574.1	3684.16	3596.57
5000 –10,000 SR	4471.84	4570.3	4475.61	4547.36
10,000–20,000 SR	4589.4	4707.93	4554.86	4661.69
More than 20,000 SR	4458.14	4364.35	4105.99	4351.67
Р	< 0.001	< 0.001	< 0.001	< 0.001

our sample could have influenced our findings. Also, we did not differentiate between participants with prior cosmetic surgery and those without. This omission could influence the interpretation of attitudes and perceptions presented in our results. Future research should consider this distinction. Lastly, our study showed the post hoc pairwise comparisons after observing significant results in the multi-group analysis. This may limit the depth of our insights into specific group differences. For future studies, we recommend that in addition to including patients who are required to undergo cosmetic surgery, their body mass index and perception of cosmetic surgery should be evaluated. Additionally, we recommend allowing participants to provide descriptive explanations for their overall perceptions by open-ended questions. Also, research should aim to recruit a more balanced age sample to ensure a more comprehensive understanding of attitudes toward cosmetic surgery.

#### **CONCLUSIONS**

We examined determinants of perceptions of cosmetic surgery in all provinces of Saudi Arabia, delivering a substantial platform for future research. Our results indicated a diminished understanding of cosmetic surgery, according to the ACSS. Additionally, we found that the items on the Intrapersonal subscale scored the highest in the acceptance of cosmetic surgery and that intrapersonal factors, thus, have the most significant impact on the acceptance of cosmetic surgery. We further found that men are less accepting of cosmetic surgery than women are. Moreover, financial stability explains the increased tendency of older people to accept cosmetic surgery, unlike younger participants, who disapproved of cosmetic surgery.

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#### DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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The authors of this study would like to thank and acknowledge all the data collectors who participated and Morat et al for providing the translated version of the scale. The authors declare that it conforms to the Declaration of Helsinki. The study was conducted under approval from King Saud University institutional review board. Before participation in the research, informed consent was gained from all participants.

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