

Acceptance of Cosmetic Procedures Among Students at the University of Sulaymaniyah/Iraq: A Cross-Sectional Study

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[Doi: 10.33899/mjn.2025.160011.1136](https://doi.org/10.33899/mjn.2025.160011.1136)

Received: May 09 2025; Revised: June 05 2025; Accepted: July 01 2025

Abstract

Introduction: The global increase in cosmetic procedures, particularly among young people, indicates changing beauty standards and improved accessibility. This cross-sectional research investigated the acceptability of surgical and non-surgical cosmetic interventions among students at the University of Sulaimani, Iraq, and examined relationships with sociodemographic characteristics.

Methods: A validated Acceptance of Cosmetic Surgery Scale (ACSS) questionnaire has been provided to 439 undergraduate students (70.6% in medical fields and 69.9% female) via online and hard-copy questionnaires. Data were analyzed using SPSS version 27, employing descriptive statistics, t-tests, and ANOVA to evaluate demographic correlations. Informed consent and ethical approval were obtained.

Results: The mean age of participants was 20.33 years (95% CI: 20.12–20.54). (80.9%) knew about procedural risks; only (15.5%) had experienced interventions. With rhinoplasty (84.6%) and laser hair removal (47.3%) most popular, surgical operations (7.5%) exceeded non-surgical (2.1%). Women showed greater acceptance than men ($p < 0.001$), especially in intrapersonal reasons (e.g., self-image enhancement). Urban residents and participants with previous procedural experience showed greater approval ($p < 0.001$). Financial situation affected non-surgical procedure acceptability ($p = 0.047$), with wealthy students more likely. Social forces had little effect.

Conclusions: Iraqi students show moderate acceptance of cosmetic procedures, motivated by personal rather than societal reasons. Attitudes are greatly influenced by gender, urban living, and experience. Educational campaigns and stricter safety regulations are needed to address risks and unequal access.

Keywords: *Acceptance; Cosmetic procedures; Iraq; Socioeconomic factors; University students.*

Introduction

Beauty is among the most highly valued attributes in society. Appearances often form the basis of first impressions, influencing how individuals are perceived and judged. While some rely on temporary methods like makeup to enhance appearance, others turn to longer-lasting options such as cosmetic procedures (Awad, 2021). These procedures aim to improve physical appearance according to socially constructed beauty standards, while preserving the normal function of treated areas (Alkhathami et al., 2023; Carlos I. Lasa, 2023). Cosmetic interventions are generally classified into surgical and non-surgical categories. Surgical procedures include breast augmentation, liposuction, rhinoplasty, abdominoplasty, and blepharoplasty. Non-surgical options encompass botox, dermal fillers, chemical peels, laser treatments, and microdermabrasion (Aldosari et al., 2019). Research suggests increasing societal acceptance of such procedures, driven by media portrayals and cultural narratives promoting idealized beauty (Aldeham et al., 2023; Di Gesto et al., 2022; Pearlman et al., 2022). According to the International Society of Aesthetic Plastic Surgery (ISAPS), global demand for cosmetic procedures continues to grow. In 2021, 12.8 million surgical and 17.5 million non-surgical procedures were performed worldwide, marking a 19.3% increase from the previous year. By 2023, this number had reached 34.9 million, with liposuction and botox being the most common surgical and non-surgical procedures, respectively (ISAPS, 2021; ISAPS, 2023). Regionally, cosmetic procedures are gaining popularity in the Middle East. Iran has some of the highest rates of rhinoplasty, influenced by cultural emphasis on facial aesthetics (Fabi et al., 2023). Turkey has become a hotspot for medical tourism, especially for hair transplantation (ÖZCAN et al., 2024). While data from Iraq remains limited, available reports indicate rising demand, likely shaped by regional trends (Fabi et al., 2023; Bahlol et al., 2023). Advances in technology and minimally invasive techniques have further increased accessibility (Chandra et al., 2020). Cosmetic procedures show increasing popularity in both global and regional markets because people increasingly emphasize the importance of physical appearance and beauty ideals. (Aldeham et al., 2023; Alyahya et al., 2022). This trend is particularly obvious among college students, who are in a critical developmental stage where views from others as well as societal expectations significantly affect their self-esteem and identity (Stapleton et al., 2017; Zhu et al., 2024). This study focuses on undergraduate students at the University of Sulaimani, one of Iraq's leading academic institutions. Located in a culturally diverse and urban region of the Kurdistan Region, the university represents a mix of ethnicities, socioeconomic backgrounds, and educational disciplines making it a suitable

microcosm for exploring attitudes toward cosmetic procedures among young Iraqi adults. This research aims to assess the acceptability of both surgical and non-surgical cosmetic procedures in this population and explore how sociodemographic variables such as gender, location, financial status, and previous exposure affect these attitudes.

Materials and Methods:

A non-probability convenience sampling method was used to recruit participants. This technique was chosen due to its practical advantages in large, decentralized student populations and to maximize response rate within logistical constraints (Etikan et al., 2015). While this method may limit the generalizability of findings beyond the study population, it is considered acceptable for exploration studies like this, where the goal is to understand trends rather than establish population-wide estimates. Targeting undergraduate students at the University of Sulaimani. Aiming for diversity across age, gender, field of study, and financial background, the sample size was initially calculated using the (Raosoft Sample Size Calculator, 2024), which recommended a minimum of 357 participants based on a population of 5,000, a 95% confidence level, and a 5% margin of error. To enhance reliability and account for potential bias, the final sample size was increased to 439 participants.

Inclusion Criteria:

Current students: Only students enrolled at the University of Sulaimani/city (old) campus were eligible.

Age requirement: To be involved in the study, participants had to be 18 years old or above.

Voluntary participation: Students have to be ready to provide informed consent and engage freely.

All genders: The study welcomed both male and female students for participation.

Language proficiency: Participants should be able to understand and complete the questionnaire in Kurdish.

Exclusion Criteria:

Non-Students: The research excluded students who did not attend the University of Sulaimani/city (old) campus.

Underage Students: The enrollment criteria exclude participants below 18 years old from participating.

Non-Consenting Individuals: Students who didn't choose to participate or provide informed consent were excluded from the research.

Incomplete Responses: The final analysis did not include questionnaires with partial responses or those including improper responses.

Methods of Data Collection: Data were collected through both online and hard copy self-administered questionnaires, with informed consent obtained from all participants. The online form was distributed via student representatives through social media and email. To avoid duplicate responses, participants were instructed to skip the survey if they had already completed it. Due to low online response rates in certain faculties, such as Medicine and Islamic Science, hard copies were also used. All responses were anonymous, and data collection took place from November 28, 2024, to February 1, 2025.

The study included 439 students (70.6% medical, 29.4% non-medical) from the University of Sulaimani, with an average age of 20.3 years (± 1.94). Most participants (76.1%) were aged 18–21, and the majority were female (69.9%), suggesting greater female interest in cosmetic procedures. Over 64% lived in urban areas, while only 2.5% resided rurally. Nearly all (94.8%) were single, which aligns with their young age group. Financially, 54.7% reported moderate income, and only 2.3% had low income. Most students (63.1%) had a normal BMI (mean=22.97), while 21.6% were overweight and 5.2% were obese. Awareness of cosmetic procedure risks was high (80.9%).

Results

Table 1: socio demographic characteristics of study sample

Characteristic	n	%
Age		
18–21	334	76.1%
22–25	98	22.3%
26–28	7	1.6%
Age (Mean \pm SD)		(20.33 \pm 1.94) (Min–Max: 17–28)
Gender		
Male	132	30.1%
Female	307	69.9%
Residential Area		
Urban	285	64.9%
Suburban	143	32.6%
Rural	11	2.5%
Field of Study		
Medical	310	70.6%
Non-Medical	129	29.4%
Marital Status		
Single	416	94.8%
Married	23	5.2%
Financial Status		
Sufficient (High)	189	43.1%
Barely Sufficient (Moderate)	240	54.7%
Insufficient (Low)	10	2.3%
Body Mass Index		
Underweight	44	10.0%
Normal Range	277	63.1%
Overweight	95	21.6%
Obese	23	5.2%
BMI (Mean \pm SD)		(22.97 \pm 4.13)
Are you aware of the risks of cosmetic procedures?		
Yes	355	80.9%
No	84	19.1%
Note/ data presented as (n=Frequencies, % =Proportions)		

Only 15.5% of participants (68 students) reported undergoing cosmetic procedures, with surgical interventions (7.5%) more common than non-surgical (2.1%). The primary motivation was aesthetic improvement (13.7%), far outweighing medical reasons (1.8%). Among surgical procedures, rhinoplasty (nose reshaping) dominated (84.6%), followed by liposuction (4.6%) and blepharoplasty (eyelid surgery, 3.1%). For non-surgical options, laser hair removal (47.3%) was most frequent, trailed by fillers (21.8%) and Botox (14.5%). Rare procedures included laser skin resurfacing (9.1%), fat-dissolving injections (3.6%), and chemical peels (1.8%).

Table 2: Cosmetic Procedures' History of the participants was presented in frequencies (n) and proportions (%)

Characteristics	n	%
Have you undergone cosmetic procedures?		
Yes	68	15.50%
No	371	84.50%
Which cosmetic procedures have you done?		
Surgical	33	7.50%
Non-Surgical	9	2.10%
Both	26	5.90%
None	371	84.50%
Reasons Behind Undergoing Cosmetic Procedures		
Improve Physical Appearance	60	13.70%
Medical Indications	8	1.80%
None	371	84.50%
Surgical Cosmetic Procedures Frequencies		
Liposuction	3	4.60%
Breast Reconstruction	1	1.50%
Hair Transplant	1	1.50%
Blepharoplasty	2	3.10%
Rhinoplasty	55	84.60%
Burn Repair Surgery	1	1.50%
Chin Augmentation	2	3.10%
Total	65	100.00%
Non-Surgical Cosmetic Procedures Frequencies		
Fillers	12	21.80%
Botox	8	14.50%

Laser Skin Resurfacing	5	9.10%
Laser Hair Removal	26	47.30%
Chemical Peels	1	1.80%
Micro Needling	1	1.80%
Fat-Dissolving Injections	2	3.60%
Total	55	100.00%
Note/ data presented as (n=Frequencies, % =Proportions)		

The Acceptance of Cosmetic Surgery Scale (ACSS) revealed a moderate overall acceptance among participants ($M = 49.41$, $SD = 18.87$). Acceptance varied significantly across subscales. The Intrapersonal Subscale ($M = 19.67$, $SD = 6.75$) demonstrated the highest endorsement, with the statement "It makes sense to have cosmetic surgery rather than spending years feeling bad about the way you look" receiving the strongest agreement ($M = 4.31$, $SD = 1.83$). The Consider Subscale ($M = 17.69$, $SD = 7.94$) indicated conditional openness to procedures, particularly under hypothetical risk-free scenarios ("If I knew there would be no negative side effects or pain, I would like to try cosmetic surgery"; $M = 4.09$, $SD = 2.08$). In contrast, the Social Subscale ($M = 12.05$, $SD = 7.01$) reflected minimal influence of external pressures, with the lowest-rated item ("If a cosmetic surgery procedure would make me more attractive to others, I would think about trying it"; $M = 2.15$, $SD = 1.63$) underscoring the dominance of self-driven motivations over societal expectations.

Table 3. Acceptance of Cosmetic Surgery Scale (ACSS) Subscale Scores of Participants (n = 440)

Subscale	Mean ± SD
Interpersonal Subscale	19.67 ± 6.75
Social Subscale	12.05 ± 7.01
Consider Subscale	17.69 ± 7.94
ACSS Overall Score	49.41 ± 18.87

Note. Data are presented as mean (M) ± standard deviation (SD).

Acceptance of non-surgical cosmetic procedures (e.g., fillers, Botox, laser treatments) among students was moderate (M = 46.41, SD = 19.83), marginally lower than acceptance of surgical procedures (M = 49.41, SD = 18.87). Subscale analysis revealed the Interpersonal Subscale as the highest endorsed domain (M = 17.45, SD = 8.02), with the strongest agreement for the statement “It makes sense to have non-surgical procedures... rather than spending years feeling bad about appearance” (M = 3.69, SD = 2.05). The Consider Subscale (M = 16.87, SD = 7.26) indicated tentative interest, particularly for the item “I have sometimes thought about having non-surgical procedures” (M = 3.62, SD = 2.09). Conversely, the Social Subscale (M = 12.09, SD = 7.20) showed minimal social influence, with the lowest-rated statement (“If a non-surgical procedure would make me more attractive to others...”; M = 2.19, SD = 1.64) reinforcing self-driven motivations as the primary driver of acceptance.

Table 4. Acceptance of Cosmetic Surgery Scale (ACSS) Subscale Scores for Non-Surgical Cosmetic Procedures (n = 440)

Subscale	Mean ± SD
Interpersonal Subscale	17.45 ± 8.02
Social Subscale	12.09 ± 7.20
Consider Subscale	16.87 ± 7.26
ACSS Overall Score	46.41 ± 19.83

Note. Data are presented as mean (M) ± standard deviation (SD).

The analysis showed limited associations between sociodemographic factors and overall acceptance of cosmetic surgery. Age, residential area, field of study, marital status, financial status, and risk awareness were not significantly related to overall acceptance (all $p > .05$). However, females scored higher than males on the Intrapersonal ($p = .038$; Cohen's $d = 0.29$, small effect) and Consider subscales ($p = .005$; Cohen's $d = 0.38$, small-to-moderate effect), indicating stronger self-motivated acceptance. BMI was significantly associated only with the Consider subscale ($p = .018$; $\eta^2 = 0.03$), with underweight students showing the highest acceptance ($M = 18.98$). Although urban students had higher mean acceptance scores than rural peers ($M = 50.01$ vs. 38.73), this difference was not statistically significant ($p = .107$). Prior cosmetic procedure experience was strongly linked to greater acceptance ($M = 60.44$ vs. 47.60 ; $p < .001$; Cohen's $d = 0.74$, medium-to-large effect), underscoring the impact of personal experience on acceptance levels.

Table 5. Relationship Between Students' Demographics and Acceptance of Cosmetic Surgery Scale (ACSS) (n = 439)

Characteristics	Intrapersonal (M ± SD)	p	Social (M ± SD)	p	Consider (M ± SD)	p	Overall (M ± SD)	p
Age		0.193		0.653		0.672		0.743
18–21	19.44 ± 6.69		12.10 ± 6.99		18.01 ± 6.42		49.56 ± 17.46	
22–25	20.18 ± 6.95		11.72 ± 6.92		17.43 ± 6.51		49.34 ± 17.09	
Gender		0.038*		0.212		0.005*		0.179
Male	18.65 ± 7.26		12.69 ± 7.67		16.55 ± 6.23		47.89 ± 18.57	
Female	20.11 ± 6.48		11.78 ± 6.70		18.43 ± 6.44		50.32 ± 16.81	
BMI		0.242		0.286		0.018*		0.232
Normal	19.97 ± 6.75		12.35 ± 7.04		18.07 ± 6.40		50.39 ± 17.62	
Overweight	18.46 ± 7.19		11.37 ± 7.37		17.15 ± 6.27		46.98 ± 17.83	
Undergone Cosmetic Procedures		<0.001*		<0.001*		<0.001*		<0.001*
Yes	24.54 ± 6.20		15.43 ± 8.08		20.47 ± 6.36		60.44 ± 17.88	
No	18.78 ± 6.46		11.43 ± 6.62		17.39 ± 6.34		47.60 ± 16.55	

Note. Data are presented as mean (M) ± standard deviation (SD). $p < 0.05$ indicates statistical significance.

Gender, financial status, residential area, awareness of procedural risks, and prior cosmetic experience significantly influenced students' acceptance of non-surgical cosmetic procedures. Female students reported higher overall acceptance than males ($M = 49.26$ vs. 39.77 ; $p < .001$; Cohen's $d = 0.48$), particularly on the intrapersonal and consider subscales. Students from high-income backgrounds scored higher than those from moderate/low-income groups ($p = .047$; $\eta^2 = 0.02$), and urban residents showed greater acceptance than rural peers ($p = .048$; $\eta^2 = 0.03$), with both reflecting small but meaningful effect sizes. Students who had previously undergone cosmetic procedures reported substantially higher acceptance ($M = 57.62$, $SD = 19.43$) than those who had not ($M = 44.35$, $SD = 19.22$; $p < .001$; Cohen's $d = 0.69$, indicating a medium-to-large effect). Similarly, those aware of cosmetic risks reported higher acceptance ($M = 47.49$ vs. 41.81 ; $p = .018$; Cohen's $d = 0.28$, small effect), though this awareness did not significantly impact the social motivation subscale ($p = .379$). No significant differences were observed for age, BMI, marital status, field of study, type of accommodation, or whether a family member was a healthcare provider (all $p > .05$). These findings suggest that internal and experiential factors—especially prior exposure and gender—are stronger predictors of acceptance than demographic characteristics alone.

Table 6. Significant Relationships Between Students' Characteristics and Acceptance of Non-Surgical Cosmetic Procedures (n = 439)

Characteristics	Intrapersonal (M ± SD)	Social (M ± SD)	Consider (M ± SD)	Overall (M ± SD)	p-value
Gender					<0.001*
Male	14.53 ± 8.41	11.44 ± 7.98	13.80 ± 6.46	39.77 ± 20.90	
Female	18.70 ± 7.51	12.36 ± 6.82	18.19 ± 7.20	49.26 ± 18.67	
Residential Area					0.048*
Urban	18.05 ± 7.80	12.30 ± 7.15	17.23 ± 7.03	47.58 ± 19.29	
Rural	12.36 ± 7.23	8.73 ± 3.98	12.82 ± 6.99	33.91 ± 15.20	
Financial Status					0.047*
High	18.89 ± 7.79	12.47 ± 7.26	17.68 ± 7.06	49.04 ± 19.41	
Moderate	16.34 ± 8.08	11.77 ± 7.20	16.24 ± 7.45	44.35 ± 20.15	
Awareness of Risks					0.018*
Yes	17.97 ± 7.95	12.23 ± 7.17	17.29 ± 7.18	47.49 ± 19.58	
No	15.24 ± 7.96	11.46 ± 7.32	15.11 ± 7.41	41.81 ± 20.31	
Undergone Procedures					<0.001*
Yes	22.06 ± 7.72	14.82 ± 7.61	20.74 ± 7.13	57.62 ± 19.43	
No	16.60 ± 7.79	11.58 ± 7.01	16.16 ± 7.07	44.35 ± 19.22	

Note. Data are presented as mean (M) ± standard deviation (SD). $p < 0.05$ indicates statistical significance.

Discussion

The demographic profile of participants aligns with trends observed in regional and global studies on cosmetic procedure acceptance. The majority of participants (76.1%) were aged 18–21 years (mean=20.33), reflecting the typical undergraduate stage, as corroborated by studies in Mosul, Iraq (Younis et al., 2024); Saudi Arabia (Alkathami et al., 2023-); and Italy (Nerini et al., 2024). Gender disparities were pronounced, with females comprising 69.9% of the sample, consistent with findings from Mosul (Ibrahim & Ibrahim, 2024) and broader literature highlighting women's heightened interest in cosmetic interventions (Jovic et al., 2017; Pearlman et al., 2022). This disparity may stem from sociocultural pressures emphasizing female appearance (Milothridis et al., 2016). Urban residency (64.9%) dominated the sample, mirroring patterns in Mosul (Younis et al., 2024) and studies linking urban environments to greater exposure to beauty standards, media influences, and cosmetic service accessibility (Nerini et al., 2019; Jung and Jun, 2022; Laus et al., 2013). This finding agrees with previous research. Living in urban areas often means seeing more images and messages about ideal body types, which can affect how young people see beauty and attractiveness, and foster openness to cosmetic enhancements (Stolic et al., 2019). Field of study emerged as a critical factor, with medical students (70.6%) demonstrating heightened awareness of procedural risks (80.9%), consistent with UAE findings (Al-Bashaireh et al., 2025). Medical curricula and exposure to health sciences may enhance knowledge and critical perspectives on cosmetic interventions (Sayegh et al., 2024 and Alghamdi et al., 2023; Alhawal and Nahas, 2023; Nayab et al., 2024). Marital status (94.8% single) reflects the young, student-dominated sample, paralleling (Nerini et al., 2024). Financial constraints (54.7% moderate income) likely limit access to costly procedures, as observed in Iran (Ghorbani et al., 2022; Abdolalizadeh et al., 2023), despite rising societal normalization of cosmetic surgery (Alyahya et al., 2022). BMI data revealed that a significant portion of participants (n = 277, 63.1%) fell within the normal weight range, a distribution comparable to findings from a study in Iran, which reported similar BMI trends among university students (Kasmaei et al., 2020).

This study highlights the prevalence and motivations behind cosmetic procedures among students at the University of Sulaimani. Despite high awareness of such interventions, only 15.5% of participants reported undergoing procedures, with surgical methods (7.5%) more common than non-surgical (2.1%). The preference for surgical options, such as rhinoplasty (84.6% of surgical cases), may reflect perceptions of their permanence and effectiveness, as noted in prior research (Dadkhahfar et al., 2021; Agrawal and Agrawal, 2021). The dominant motivation was aesthetic

enhancement (13.7%), aligning with regional trends in Syria and the broader Middle East, where appearance-driven concerns outweigh medical necessity (Funakoshi et al., 2024; Pearlman et al., 2022; Hermans et al., 2024).

Non-surgical procedures, though less prevalent, were led by laser hair removal (47.3%), indicative of its normalization as a routine grooming practice, consistent with studies in Saudi Arabia (Bondagji et al., 2024; Coppini et al., 2024). The prominence of rhinoplasty mirrors regional and global patterns. As a central facial feature, the nose often becomes a focal point for beauty standards, especially within Middle Eastern cultural contexts (Alqahtani et al., 2024), underscoring cultural emphasis on facial aesthetics in Middle Eastern contexts (Alqahtani et al., 2024). Comparative data from Kurdistan (13.4% prevalence), Iran (12.8%), and Lebanon (9.3% rhinoplasty rates) reinforce shared beauty standards, while Lebanon's higher laser hair removal uptake (32%) reflects evolving non-invasive trends (Kamali et al., 2020; Ghorbani et al., 2022; Elias et al., 2022). The findings underscore interpersonal factors; self-benefits (personal dissatisfaction with appearance) as the primary motivator for considering cosmetic surgery, significantly outweighing social influences. This aligns with studies by (Sayegh et al., 2024 and Alyahya et al., 2022), who emphasize the dominance of individual motivations over external pressures. The strongest endorsement came from the Interpersonal Subscale statement, "It makes sense to have cosmetic surgery rather than spending years feeling bad about the way you look" ($M = 4.31$, $SD = 1.83$), reflecting a pragmatic view of surgery as a solution for enhancing self-esteem and physical appearance. These results mirror regional trends, such as a UAE study where 47.6% of female students cited appearance enhancement as their primary motivation (Al-Bashaireh et al., 2025). Intrinsic factors like body image concerns and self-esteem improvement are consistent drivers, as shown in global research (Morait et al., 2019; Chen et al., 2019; Al Ghadeer et al., 2021). Dissatisfaction with physical appearance, particularly among those with lower self-esteem, often fuels acceptance of cosmetic procedures (Óry et al., 2023; Sterian et al., 2023). Conversely, the social subscale scored lowest ($M = 12.05$, $SD = 7.01$), with minimal agreement on statements like "If a cosmetic surgery procedure would make me more attractive to others..." ($M = 2.15$, $SD = 1.63$). This reinforces that societal pressures play a marginal role in decision-making, consistent with studies showing intrapersonal motivations eclipse sociocultural influences (Namjoo et al., 2023; Arab et al., 2019). Finally, cosmetic surgery acceptance is predominantly driven by interpersonal factors (self-image concerns), not external validation,

highlighting the need for healthcare strategies addressing psychological well-being alongside aesthetic aspirations.

Also, our results regarding non-surgical cosmetic procedures highlight interpersonal factors such as personal dissatisfaction with appearance as the primary motivator for considering non-surgical cosmetic procedures (e.g., fillers, Botox, laser), outweighing social influences. This is evidenced by higher scores in the Interpersonal Subscale, particularly the statement “It makes sense to have non-surgical procedures... rather than spending years feeling bad about appearance” ($M = 3.69$, $SD = 2.05$), reflecting participants’ belief in these interventions as tools for enhancing self-image and well-being. These findings align with regional studies, such as research in Saudi Arabia (AlShamlan et al., 2022), where personal motivations like self-esteem and physical appearance improvement dominated over social pressures. The Social Subscale scored lowest ($M = 12.09$, $SD = 7.20$), with minimal agreement on socially driven statements like “If a non-surgical procedure would make me more attractive to others...” ($M = 2.19$, $SD = 1.64$). This suggests students prioritize personal satisfaction over societal approval, marking a shift away from traditional peer or cultural pressures (Sayegh et al., 2024; Arkoubi et al., 2025). The trend aligns with broader research indicating younger populations increasingly view cosmetic choices as matters of individual improvement rather than conformity to external norms (Alkhathami et al., 2023; Alshami and Alsaati, 2023). Collectively, these results underscore the centrality of self-driven motivations in non-surgical cosmetic procedure acceptance, reinforcing the need for healthcare strategies that address psychological well-being alongside aesthetic goals.

A statistically significant difference was observed between male and female students in the intrapersonal ($p = 0.038$) and consider ($p = 0.005$) subscales of the ACSS, with females exhibiting higher mean scores. This indicates that female students are more likely to be influenced by internal motivations related to self-image and more open to contemplating cosmetic interventions. These results are consistent with existing literature. For example, (Morait et al., 2019) found that Saudi women scored significantly higher than men on the ACSS, which was attributed to greater sociocultural pressures on women to conform to societal beauty standards. Similarly, (Lafta & Kareem, 2024) reported that women in Iraq were more likely to undergo facial cosmetic procedures, largely driven by aesthetic concerns. However, no statistically significant gender differences were observed in the social subscale, suggesting that external social motivations may be similarly perceived across genders in this sample.

A significant association was found between BMI and the consider subscale ($p = 0.018$), with underweight students reporting the highest mean scores, followed by students in the normal, overweight, and obese categories. This trend implies that individuals with lower BMI may experience greater concern about their physical appearance and thus be more inclined to consider cosmetic surgery. This finding is in line with a study conducted in the UAE, which reported a link between lower BMI, body dissatisfaction, and increased interest in cosmetic procedures (Al-Bashaireh et al., 2025). (Nerini et al., 2019) Also found that individuals with lower BMI often experience heightened body dissatisfaction. Nevertheless, this outcome contrasts with findings from Turkey, where (Sonmez & Esiyok, 2023) reported a higher inclination toward cosmetic surgery among obese individuals, possibly due to dissatisfaction with body shape.

A significant positive association was observed between previous experience with cosmetic procedures and overall acceptance of cosmetic surgery, as reflected in elevated ACSS scores. This suggests that individuals who have undergone cosmetic procedures are more likely to maintain favorable attitudes toward such interventions, potentially due to satisfaction with outcomes or increased familiarity. These findings align with previous research. (Kadhim et al., 2024) found that individuals with multifaceted cosmetic experiences in Karbala demonstrated higher acceptance levels and increased interest in future procedures. Similarly, a cross-sectional study in Saudi Arabia reported that prior cosmetic surgery significantly predicted greater openness to subsequent cosmetic interventions (Morait et al., 2019).

The study also explored the relationships between other demographic variables, such as age, field of study, and financial status and levels of acceptance of cosmetic surgery. However, these associations were not statistically significant across any ACSS subscales. This suggests that while certain demographic factors (e.g., gender, BMI, and prior experience) may influence attitudes toward cosmetic procedures, others may have limited or context-dependent effects in this population.

Gender emerged as a significant factor in shaping students' attitudes toward non-surgical cosmetic procedures. Female students scored significantly higher (49.26 ± 18.67) than male students (39.77 ± 20.90), which aligns with findings from Saudi Arabia and Iran, where women showed greater acceptance of cosmetic procedures (Ghorbani et al., 2022; Alsubhi et al., 2023). This difference can be attributed to the greater societal pressures placed on women to meet beauty standards (Al Ghadeer et al., 2021). However, the Social domain did not show a significant gender difference ($p = 0.22$), suggesting that social influences may not be as divergent between genders as traditionally

assumed. This could reflect changing societal norms, where both men and women are increasingly influenced by similar beauty ideals (Alotaibi, 2021).

Residential background also played a significant role, with urban students demonstrating a higher acceptance of non-surgical cosmetic procedures compared to their rural counterparts. This is consistent with studies showing that urban environments, which offer greater access to cosmetic services and exposure to beauty-focused media, foster more positive attitudes toward cosmetic enhancements (Amiri et al., 2021; Bondagji et al., 2024). Conversely, rural students scored the lowest, possibly due to limited access to such services and more traditional values in rural areas (Sarwer, 2019).

Financial status was another significant factor. Students with higher financial means showed greater acceptance of non-surgical cosmetic procedures, reflecting the broader connection between economic resources and the ability to afford cosmetic interventions. Prior research has highlighted that individuals with higher income levels are more likely to invest in such procedures, often viewing them as a form of self-investment or for social acceptance (AlShamlan et al., 2022; Sayegh et al., 2024). Students' awareness of the risks associated with cosmetic procedures was also significantly associated with attitudes. Those who were more informed about the potential risks (e.g., infections, dissatisfaction with results) exhibited a more cautious approach and higher acceptance of non-surgical procedures, suggesting that risk awareness promotes responsible decision-making (Kasmaei et al., 2020; Alghamdi et al., 2023). Despite this, other studies suggest that societal pressures may sometimes outweigh these concerns, leading to a higher interest in cosmetic procedures even when risks are known (Amiri et al., 2021).

Our study found that prior experience with cosmetic procedures was significantly associated with more positive attitudes toward non-surgical interventions. Students who had previously undergone non-surgical procedures had a significantly higher overall acceptance score (73.44 ± 13.39) compared to those with no experience (44.35 ± 19.22). This finding is supported by studies from Saudi Arabia and the broader region. Research by (Alghamdi et al., 2023) and (AlRasheed and Aldossary, 2025) indicated that individuals with prior cosmetic procedure experience exhibited higher acceptance and more positive attitudes toward both surgical and non-surgical procedures. These studies suggest that familiarity with cosmetic procedures, especially through personal experience, can reduce apprehension and increase openness to further interventions (Alghamdi et al., 2023; Lafta and Kareem, 2024; Bondagji et al., 2024).

Some factors did not show statistically significant results. For instance, BMI, age, field of study, or marital status did not significantly influence students' acceptance of non-surgical cosmetic procedures. Although these factors have been linked to cosmetic decision-making in some studies, they did not emerge as meaningful in this particular sample. This may suggest that other demographic and cultural variables, such as gender, residential background, Financial status, students' awareness of the risks associated with cosmetic procedures, and prior experience with cosmetic procedures, have a stronger influence on cosmetic attitudes in this context. These findings offer valuable insights for policy development and health promotion at the university level. Gender-specific initiatives such as workshops focused on body image resilience, especially for female students could help address internalized beauty pressures. In rural campuses, programs should aim to understand and bridge cultural resistance by promoting balanced information about appearance-related health and well-being. Awareness campaigns can educate students on the psychological and physical risks associated with cosmetic procedures, fostering informed decision-making. Additionally, integrating media literacy and digital wellness into student life curricula may help reduce the impact of unrealistic beauty ideals, particularly on vulnerable populations. University counseling services should also be trained to address appearance-related concerns in a culturally sensitive and evidence-based manner.

Limitations of the Study

This study has several important limitations. First, it used convenience sampling, meaning participants were chosen based on availability, not randomly. This limits how well the results represent all students at the University of Sulaimani or other universities. Second, the data were collected through self-reported questionnaires, which may be affected by social desirability bias participants might have given answers they thought were more acceptable, especially on sensitive issues like cosmetic procedures.

Third, because the study used a cross-sectional design (data collected at one point in time), it cannot show how attitudes or behaviors change over time. The cultural and social context of the Kurdistan Region of Iraq may also influence the results, making them less applicable to other regions with different values or beliefs.

Additionally, while the questionnaire offered structured insights, it lacked qualitative depth. The absence of open-ended questions, interviews, or focus groups may have restricted the opportunity to explore students' motivations, concerns, and nuanced perspectives in more detail. Future studies could benefit from integrating qualitative methods to capture a broader range of

experiences and contextual influences. Moreover, no follow-up questions were asked specifically of participants who had previously undergone cosmetic procedures. This limited our ability to understand nature, context, or satisfaction related to those experiences, which could have enriched the interpretation of acceptance levels. Despite these challenges, the study still provides useful insights into how university students perceive the acceptance of cosmetic procedures.

CONCLUSIONS:

Moderate acceptance of cosmetic procedures exists among University of Sulaimani students, driven primarily by intrapersonal motivations (such as improving self-image) rather than social pressures. A significant gender disparity was observed, with female students demonstrating higher acceptance of both surgical and non-surgical interventions. Prior experience with cosmetic procedures strongly correlates with increased acceptance, suggesting a potential normalization effect among users. Rhinoplasty and laser hair removal emerged as the most common procedures, reflecting prevailing regional aesthetic trends and service availability. Socioeconomic and geographic factors also played a role: students from urban areas and those with higher financial means were more likely to accept cosmetic procedures. Despite a high level of awareness regarding potential risks (80.9%), acceptance remains widespread, indicating that aesthetic aspirations often outweigh safety concerns.

Recommendations

1. Develop culturally sensitive educational campaigns tailored to the Iraqi context to promote informed decision-making about cosmetic procedures. These should incorporate local values, religious considerations, and social norms while providing balanced information on risks and benefits.
2. Integrate body positivity, self-esteem building, and mental health support into university wellness programs to address appearance-related anxieties and reduce reliance on cosmetic enhancement.
3. Strengthen regulation of cosmetic clinics and practitioners to ensure high ethical standards, patient safety, and truthful marketing practices, especially in light of growing demand.
4. Improve access to licensed non-surgical cosmetic services in rural areas to reduce geographic disparities and discourage unregulated alternatives.

5. Encourage longitudinal and mixed-methods research to explore the evolving attitudes toward cosmetic procedures and assess the psychological and social impacts over time.

Acknowledgements

The authors would like to express their gratitude to the participating mothers, the primary health care staff in Mosul, and the College of Nursing, University of Mosul, for their support during the data collection process. Special thanks are extended to the expert panel who reviewed and validated the questionnaire instrument

Source of Funding

The authors did not receive any specific funding to carry out the work presented in this article. The study was self-funded by the research team.

Conflicts of Interest

The authors declare that there are no conflicts of interest related to this work.

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