

KNOWLEDGE, ATTITUDE OF WOMEN TOWARD AESTHETIC-COSMETIC PROCEDURES NON-SURGICAL: SAMPLE FROM IRAQ, 2023

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ABSTRACT

Background: Non-surgical aesthetic-cosmetic procedures have grown rapidly worldwide, influenced by the desire for youthfulness and advancements in medical technology. Understanding the knowledge and attitudes of women toward these procedures is essential for healthcare professionals and the aesthetic industry, especially in regions like Iraq where cultural and socioeconomic factors may shape perceptions. **Methods:** A cross-sectional analytic study was conducted among Iraqi women from September 2022 to March 2023. An online questionnaire was distributed through social media and government channels, collecting responses from 648 participants, with a response rate of 92.57%. The survey addressed demographics, knowledge levels, attitudes towards specific procedures, and motivations or deterrents for pursuing aesthetic interventions. Statistical analysis included frequency, percentage descriptions, and chi-square tests to assess associations between independent variables and attitudes (significance set at $p < 0.05$). **Results:** Most participants (94.3%) were aware of non-surgical cosmetic procedures, and 82.4% demonstrated substantial knowledge of their existence. Popular procedures included laser hair removal, with 33.6% showing strong desire, while 44.8% were strongly opposed to tattoos. The leading motivation for undergoing procedures was to "refresh" personal appearance (23.9%), whereas satisfaction with natural beauty (23.8%) was the most common reason for abstention. Significant associations were found between attitudes toward specific procedures and factors such as age, educational level, job, and marital status ($p < 0.05$). **Conclusion:** Iraqi women display high knowledge and varied attitudes toward non-surgical aesthetic-cosmetic procedures, with preferences and motivations significantly affected by their demographic background. These findings highlight the importance of tailored aesthetic-care consultations that address individual needs, ensuring informed choices and sensitive healthcare delivery in the Iraqi context.

KEYWORDS: These findings highlight the importance of tailored aesthetic-care consultations that address individual needs, ensuring informed choices and sensitive healthcare delivery in the Iraqi context.

INTRODUCTION

Patients pursuing cosmetic operations presumably have different features, motivations, and aspirations than patients in other medical fields because these surgeries are life enhancing rather than life saving.^[1]

Backboard cosmetic surgery is the preservation, reconstruction or enhancement of a person's outward appearance through surgical and non-surgical procedures.^[2]

In the last ten years, the non-surgical aesthetic sector has experienced substantial growth. Injections of botulinum toxin (Botox) and dermal fillers in particular have grown widespread in modern society.^[3]

In the late 1980s, Carruthers utilized botulinum toxin type A for the first time on the face, following the Food and Drug Administration (FDA) approval of botulinum toxin in the United States in 1990, a revolution in the treatment of aging skin has occurred in recent years.^[4]

Over 2 million dermal filler procedures were carried out in the US alone in 2016 according to the American society of plastic surgeons, indicating that injectable fillers have become a popular alternative for facial rejuvenation.^[5]

The desire to maintain youth, economic prosperity, technological and medical advancements that allowed the use of new pharmaceutical and devices with minimal downtime and complications, professional pressure to get aesthetic operations, as well as influence from the media and highly publicized advertisements all contribute to the rising demand for these procedures.^[6]

Numerous minimally invasive cosmetic procedures (MICPs), including injectable Botox, face fillers, platelet rich plasma (PRP), mesotherapy and chemical peels are easily offered by dermatology and cosmetic outpatient clinics, it is likely that the ease with which patients can contact MICPs and the speed with which doctors can apply for them has increased Middle-aged women's desire and acceptance for such procedures and helped them achieve a more natural appearance without having to undergo general anesthesia, surgical incisions or extensive preoperative planning.^[4]

This study aims to determine women's knowledge and attitudes about non-surgical plastic surgeries and find association between women's knowledge and attitudes about non-surgical plastic surgeries with some their variables.

METHOD AND PARTICIPANTS

Setting and study design

A cross-sectional study with analytic element, was conducted by online survey from 1st September 2022-1st March 2023, for Iraqi women through the social media groups (Facebook, WhatsApp, Fiber, Telegram) & available e-mails, & each woman can share the questionnaire link to their females' friends, relatives, colleagues. Also distributed the online link through the Ministry of Health, Ministry of Higher education, Ministry of Trade.

Ethical consideration

Verbal consent was obtained from all participants prior to data collection.

Definition of the enrolment criteria

any Iraq woman (currently life in Iraq) taking the online questionnaire and complete it will be included in the study.

Excluded Criteria

Any women who did not complete her online questionnaire.

Sampling Methods

By distribution of online questionnaire to Iraqi women through the social media groups (Facebook, WhatsApp,

Fiber, Telegram) & available e-mails, & each woman can share the questionnaire link to their females (friends, relatives, colleagues).

Outcome

Frequency and percentage were used to describe the data and chi square test was used to test association between dependent and independent variable. Statistical significance was pre-determined as $p < 0.05$.

Details of the questionnaire

the questionnaire developed after reading many published researches and after taken opinion of four experts (two prophet community medicine, and two consultant family physicians) additionally pilot study done with 20 participants excluded from the study and all consideration taken.

The questionnaire consists from five parts: **the first part** consists from seven questions of demographic variable (age, residence, educational level, job, monthly income, marital status, children number if present). **The second part** consists of two question about previous hearing and knowing the participant about aesthetic-cosmetic procedures non-surgical. **The third part** consists from nine questions (willing to have aesthetic-cosmetic procedures non-surgical, fuller, Botox, thread-lift, skin scribe, tattoos, removing the skin hair by laser, whitening the skin by laser, and others procedures (mention them). **Fourth part** consists from four question (two about why willing to do aesthetic-cosmetic procedures non-surgical for the female willing that, and two about why not willing to do them for female not willing). Fifth part was consisting from 10 questions about having an aesthetic-cosmetic procedures non-surgical (did you having any of aesthetic-cosmetic procedures non-surgical, name, how many, place you did it/them, by whom, any complications, or sustain deformity, if occurred what it's?).

Statistical analysis

The google form give the answers of the participants as excel sheet, after changing to coded and transform to SPSS ver. 26 file and will be analysis.

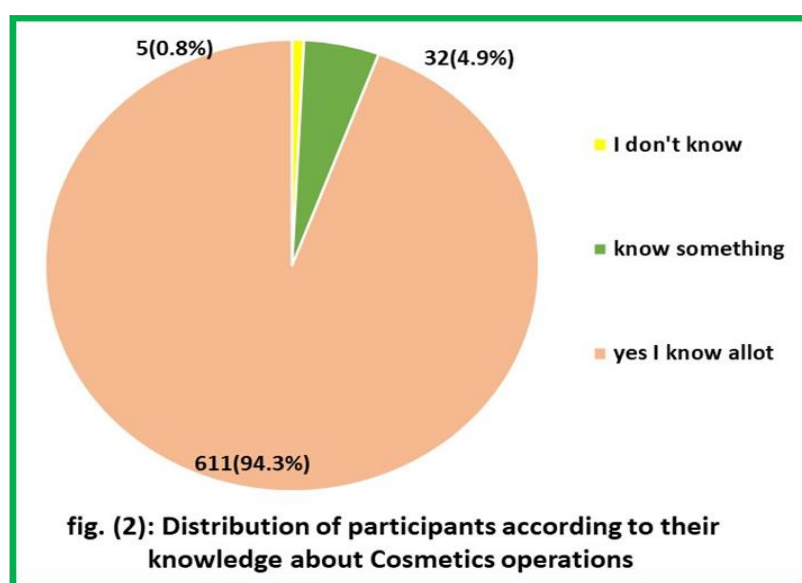
RESULTS

The study involved 648 women, with a response rate of 92.57%, with the highest percentage aged 30-39, married, with no children, (Table 1)

Table 1: Distribution of participants according their demographic variables.

| N=648 | | Frequency | Percent |
|--|-------------------------------------|------------------|----------------|
| Age (yrs.) Mean \pm SD=37.10 \pm 11.989 | ≤ 29 | 190 | 29.3 |
| | 30-39 | 201 | 31.0 |
| | 40-49 | 140 | 21.6 |
| | 50-59 | 92 | 14.2 |
| | ≥ 60 | 25 | 3.9 |
| Marital status | single | 184 | 28.4 |
| | married | 407 | 62.8 |
| | widow | 18 | 2.8 |
| | divorce | 39 | 6.0 |
| Children number | No children | 229 | 35.3 |
| | 1 child | 79 | 12.2 |
| | 2 children | 139 | 21.5 |
| | 3 children | 117 | 18.1 |
| | 4 children and more | 84 | 13.0 |
| educational level | not read not write | 35 | 5.4 |
| | Complete primary | 35 | 5.4 |
| | Complete secondary | 75 | 11.6 |
| | Complete college/institution | 308 | 47.5 |
| | postgraduate degree | 195 | 30.1 |
| Job | medical staff | 179 | 27.6 |
| | academic teachers | 47 | 7.3 |
| | nurse & paramedical staff | 60 | 9.3 |
| | house-wife | 118 | 18.2 |
| | financial / cleric | 134 | 20.7 |
| | student | 65 | 10.0 |
| | educational teachers | 29 | 4.5 |
| | engineer & others | 16 | 2.5 |
| Monthly income Iraqi dinar | < half million ID | 84 | 13.0 |
| | 500000 ID - < 1000000 ID | 190 | 29.3 |
| | 1000000 ID - < 1500000 ID | 184 | 28.4 |
| | ≥ 1500000 ID | 190 | 29.3 |

The majority 611(94.3%) of the participants heard about the cosmetics non-surgical procedures, and 534(82.4%) did know present of cosmetics non-surgical procedures as shown in figure (2)



The study found that 24.8% of participants had no desire for fillers, 39.4% for thread, 31.9% for laser hair removal, 28.5% for Botox, 44.8% for tattoos, and 36.6% for scribes. (Table 2)

Table (2): Distribution of participants according to their attitude about Cosmetics operations.

| | Not thinking about | strongly not-desire | Not-desire | neutral desire | desire | strongly desire |
|--------------------|--------------------|------------------------------|------------------------------|----------------|------------------------------|------------------------------|
| Filer | 62 (9.6%) | 151 (23.3%) | 161 (24.8%) | 104 (16.0%) | 112 (17.3%) | 58 (9.0%) |
| Botox | 57 (8.8%) | 185 (28.5%) | 172 (26.5%) | 74 (11.4%) | 108 (16.7%) | 52 (8.0%) |
| Thread | 58 (9.0%) | 214 (33.0%) | 255 (39.4%) | 60 (9.3%) | 40 (6.2%) | 21 (3.2%) |
| Scribe | 34 (5.2%) | 95 (14.7%) | 144 (22.2%) | 109 (16.8%) | 172 (26.5%) | 94 (14.5%) |
| Tattoo | 18 (2.8%) | 290 (44.8%) | 190 (29.3%) | 50 (7.7%) | 62 (9.6%) | 38 (5.9%) |
| Remove hair laser | 20 (3.1%) | 68 (10.5%) | 98 (15.1%) | 75 (11.6%) | 169 (26.1%) | 218 (33.6%) |
| Whitening by laser | 37 (5.7%) | 198 (30.6%) | 207 (31.9%) | 63 (9.7%) | 80 (12.3%) | 63 (9.7%) |

In Table 3, the study found 23.9% of respondents prefer non-surgical aesthetic-cosmetic procedures to refresh themselves, while the most disliked reason was feeling satisfied with their natural beauty.

Table (3): Distribution of participants according to causes of liking and disliking performance Cosmetics operations (can choose.

| | Frequency | Percent |
|---|------------|-------------|
| Causes of willing to do aesthetic-cosmetic procedures non-surgical | | |
| I like it | 155 | 23.9 |
| Asked by my family/ my husband | 11 | 1.7 |
| To refresh me | 155 | 23.9 |
| My friend/colleague did it, I when to try it | 5 | 0.8 |
| Needed it psychologically | 110 | 17.0 |
| Needed it physically | 63 | 9.7 |
| Just like others, modal | 6 | 0.9 |
| Why not do it | 13 | 2.0 |
| Never think or not sure | 82 | 12.7 |
| Causes of never willing to do aesthetic-cosmetic procedures non-surgical | | |
| I dislike it | 64 | 9.9 |
| prevented by my family/ my husband | 14 | 2.2 |
| I don't need it, satisfied with what god design me | 154 | 23.8 |
| Religiously not correct or sacred | 56 | 8.6 |
| afraid from complications | 77 | 11.9 |
| Expensive | 42 | 6.5 |
| Un-necessary | 83 | 12.8 |
| Why must | 147 | 22.7 |
| Never think or not sure | 33 | 5.1 |

The current study revealed significant association between participants' age & and their desire to filler, Botox, thread, scribe, and remove hair by laser (p- value 0.001, 0.000, 0.049, 0.001, & 0.000 respectively). As shown in table (4)

Table (4): association between participants' attitude with their age.

| | | Age (years) | | | | | Total | p- value |
|-------|------------------------------|-------------|-------|--------|-------|------|-------|--------------|
| | | < 29 | 30-39 | 40 -49 | 50-59 | ≥ 60 | | |
| filer | Not thinking about, not sure | 17 | 15 | 11 | 18 | 1 | 62 | 0.001 |
| | strongly no-desire | 33 | 43 | 34 | 27 | 14 | 151 | |
| | no desire | 56 | 48 | 32 | 18 | 7 | 161 | |
| | neutral desire | 36 | 32 | 27 | 8 | 1 | 104 | |

| | | | | | | | | |
|----------------------|------------------------------|----|----|----|----|----|-----|--------------|
| | desire | 31 | 44 | 23 | 13 | 1 | 112 | |
| | strongly desire | 17 | 19 | 13 | 8 | 1 | 58 | |
| Botox | Not thinking about, not sure | 17 | 9 | 12 | 19 | 0 | 57 | 0.000 |
| | strongly no-desire | 58 | 49 | 35 | 29 | 14 | 185 | |
| | no desire | 73 | 47 | 25 | 20 | 7 | 172 | |
| | neutral desire | 19 | 28 | 20 | 6 | 1 | 74 | |
| | desire | 17 | 43 | 34 | 11 | 3 | 108 | |
| | strongly desire | 6 | 25 | 14 | 7 | 0 | 52 | |
| thread | Not thinking about, not sure | 18 | 14 | 11 | 15 | 0 | 58 | 0.049 |
| | strongly no-desire | 60 | 60 | 45 | 36 | 13 | 214 | |
| | no desire | 85 | 85 | 51 | 27 | 7 | 255 | |
| | neutral desire | 16 | 19 | 12 | 9 | 4 | 60 | |
| | desire | 7 | 14 | 14 | 4 | 1 | 40 | |
| | strongly desire | 4 | 9 | 7 | 1 | 0 | 21 | |
| scribe | Not thinking about, not sure | 8 | 12 | 6 | 8 | 0 | 34 | 0.001 |
| | strongly no-desire | 23 | 23 | 21 | 18 | 10 | 95 | |
| | no desire | 35 | 44 | 28 | 26 | 11 | 144 | |
| | neutral desire | 37 | 29 | 26 | 15 | 2 | 109 | |
| | desire | 54 | 60 | 40 | 16 | 2 | 172 | |
| | strongly desire | 33 | 33 | 19 | 9 | 0 | 94 | |
| tattoo | Not thinking about, not sure | 5 | 8 | 2 | 3 | 0 | 18 | 0.059 |
| | strongly no-desire | 75 | 79 | 72 | 48 | 16 | 290 | |
| | no desire | 64 | 53 | 36 | 28 | 9 | 190 | |
| | neutral desire | 15 | 18 | 12 | 5 | 0 | 50 | |
| | desire | 17 | 25 | 14 | 6 | 0 | 62 | |
| | strongly desire | 14 | 18 | 4 | 2 | 0 | 38 | |
| Remove hair by Laser | Not thinking about, not sure | 6 | 3 | 3 | 8 | 0 | 20 | 0.000 |
| | strongly no-desire | 9 | 16 | 16 | 20 | 7 | 68 | |
| | no desire | 19 | 18 | 24 | 27 | 10 | 98 | |
| | neutral desire | 20 | 17 | 22 | 10 | 6 | 75 | |
| | desire | 54 | 58 | 39 | 17 | 1 | 169 | |
| | strongly desire | 82 | 89 | 36 | 10 | 1 | 218 | |
| Whitting by Laser | Not thinking about, not sure | 9 | 8 | 11 | 7 | 2 | 37 | 0.339 |
| | strongly no-desire | 49 | 61 | 43 | 32 | 13 | 198 | |
| | no desire | 64 | 66 | 38 | 31 | 8 | 207 | |
| | neutral desire | 21 | 20 | 13 | 8 | 1 | 63 | |
| | desire | 27 | 25 | 23 | 5 | 0 | 80 | |
| | strongly desire | 20 | 21 | 12 | 9 | 1 | 63 | |

This study revealed significant association between participants' educational level & and their desire to filer, Botox, scribe, tattoo, remove hair by laser and whiting

by laser (p- value 0.001, 0.002, 0.000, 0.000, 0.000& 0.005 respectively). As shown in table (5).

Table (5): association between participants' attitude with their educational level.

| | | Educational level | | | | | Total | p- value |
|-------|------------------------------|--------------------|------------------|--------------------|-------------------------------|---------------------|-------|--------------|
| | | not read not write | Complete primary | Complete secondary | Complete college/ institution | postgraduate degree | | |
| filer | Not thinking about, not sure | 3 | 3 | 7 | 28 | 21 | 62 | 0.001 |
| | strongly no-desire | 15 | 15 | 10 | 57 | 54 | 151 | |
| | no desire | 7 | 4 | 24 | 84 | 42 | 161 | |
| | neutral desire | 2 | 2 | 9 | 56 | 35 | 104 | |
| | desire | 2 | 6 | 13 | 59 | 32 | 112 | |
| | strongly desire | 6 | 5 | 12 | 24 | 11 | 58 | |
| Botox | Not thinking about, not sure | 3 | 2 | 9 | 26 | 17 | 57 | 0.002 |

| | | | | | | | | |
|----------------------|------------------------------|----|----|----|-----|-----|-----|-------|
| | strongly no-desire | 14 | 16 | 20 | 72 | 63 | 185 | |
| | no desire | 12 | 6 | 23 | 95 | 36 | 172 | |
| | neutral desire | 2 | 2 | 5 | 35 | 30 | 74 | |
| | desire | 4 | 6 | 5 | 58 | 35 | 108 | |
| | strongly desire | 0 | 3 | 13 | 22 | 14 | 52 | |
| thread | Not thinking about, not sure | 2 | 1 | 5 | 30 | 20 | 58 | 0.121 |
| | strongly no-desire | 13 | 18 | 21 | 91 | 71 | 214 | |
| | no desire | 15 | 14 | 32 | 124 | 70 | 255 | |
| | neutral desire | 0 | 1 | 5 | 35 | 19 | 60 | |
| | desire | 3 | 0 | 6 | 19 | 12 | 40 | |
| | strongly desire | 2 | 1 | 6 | 9 | 3 | 21 | |
| scribe | Not thinking about, not sure | 3 | 2 | 5 | 14 | 10 | 34 | 0.000 |
| | strongly no-desire | 11 | 15 | 8 | 33 | 28 | 95 | |
| | no desire | 10 | 9 | 13 | 64 | 48 | 144 | |
| | neutral desire | 4 | 3 | 5 | 60 | 37 | 109 | |
| | desire | 3 | 5 | 24 | 89 | 51 | 172 | |
| | strongly desire | 4 | 1 | 20 | 48 | 21 | 94 | |
| tattoo | Not thinking about, not sure | 0 | 1 | 3 | 8 | 6 | 18 | 0.000 |
| | strongly no-desire | 17 | 15 | 23 | 122 | 113 | 290 | |
| | no desire | 6 | 7 | 23 | 102 | 52 | 190 | |
| | neutral desire | 0 | 1 | 8 | 32 | 9 | 50 | |
| | desire | 6 | 4 | 10 | 29 | 13 | 62 | |
| | strongly desire | 6 | 7 | 8 | 15 | 2 | 38 | |
| Remove hair by Laser | Not thinking about, not sure | 2 | 1 | 2 | 8 | 7 | 20 | 0.000 |
| | strongly no-desire | 9 | 10 | 7 | 21 | 21 | 68 | |
| | no desire | 10 | 8 | 13 | 36 | 31 | 98 | |
| | neutral desire | 5 | 3 | 8 | 35 | 24 | 75 | |
| | desire | 4 | 7 | 20 | 79 | 59 | 169 | |
| | strongly desire | 5 | 6 | 25 | 129 | 53 | 218 | |
| Whitting by Laser | Not thinking about, not sure | 1 | 1 | 4 | 18 | 13 | 37 | 0.005 |
| | strongly no-desire | 16 | 20 | 14 | 77 | 71 | 198 | |
| | no desire | 9 | 9 | 26 | 106 | 57 | 207 | |
| | neutral desire | 1 | 0 | 7 | 36 | 19 | 63 | |
| | desire | 3 | 4 | 14 | 35 | 24 | 80 | |
| | strongly desire | 5 | 1 | 10 | 36 | 11 | 63 | |

Also, this study found significant association between participants' job & and their desire to thread, scribe, tattoo, remove hair by laser and whiting by laser (p-

value 0.010, 0.001, 0.000, 0.000, & 0.003 respectively). As shown in table.^[6]

Table (6): association between participants' attitude with their Job.

| | | medical staff | academic teachers | nurse & paramedical staff | house-wife | financial / admnitive/ cleric | student | educational teachers | engineer & others | Total | P value |
|-------|------------------------------|---------------|-------------------|---------------------------|------------|-------------------------------|---------|----------------------|-------------------|-------|---------|
| Total | | 179 | 47 | 60 | 118 | 134 | 65 | 29 | 16 | 648 | 0.007 |
| filer | Not thinking about, not sure | 19 | 6 | 5 | 9 | 14 | 7 | 1 | 1 | 62 | |
| | strongly no-desire | 43 | 10 | 10 | 34 | 28 | 15 | 9 | 2 | 151 | |
| | no desire | 42 | 12 | 19 | 33 | 30 | 19 | 4 | 2 | 161 | |
| | neutral desire | 41 | 4 | 6 | 11 | 18 | 12 | 7 | 5 | 104 | |
| | desire | 29 | 9 | 16 | 13 | 29 | 7 | 7 | 2 | 112 | |
| | strongly desire | 5 | 6 | 4 | 18 | 15 | 5 | 1 | 4 | 58 | |
| Boto | Not thinking about, not sure | 16 | 4 | 5 | 10 | 15 | 3 | 2 | 2 | 57 | 0.067 |
| | strongly no-desire | 51 | 14 | 13 | 39 | 27 | 25 | 12 | 4 | 185 | |

| | | | | | | | | | | | |
|----------------|------------------------------|-----|----|----|----|----|----|----|---|-----|-------|
| | no desire | 35 | 12 | 21 | 35 | 38 | 24 | 5 | 2 | 172 | |
| | neutral desire | 29 | 6 | 5 | 8 | 14 | 7 | 4 | 1 | 74 | |
| | desire | 36 | 7 | 10 | 14 | 29 | 4 | 5 | 3 | 108 | |
| | strongly desire | 12 | 4 | 6 | 12 | 11 | 2 | 1 | 4 | 52 | |
| threa | Not thinking about, not sure | 20 | 5 | 5 | 6 | 13 | 3 | 2 | 4 | 58 | 0.010 |
| | strongly no-desire | 63 | 15 | 15 | 38 | 37 | 29 | 13 | 4 | 214 | |
| | no desire | 65 | 16 | 30 | 58 | 53 | 24 | 6 | 3 | 255 | |
| | neutral desire | 22 | 4 | 3 | 5 | 16 | 5 | 4 | 1 | 60 | |
| | desire | 9 | 5 | 2 | 7 | 8 | 4 | 3 | 2 | 40 | |
| | strongly desire | 0 | 2 | 5 | 4 | 7 | 0 | 1 | 2 | 21 | |
| scribe | Not thinking about, not sure | 5 | 2 | 7 | 7 | 5 | 3 | 3 | 2 | 34 | 0.001 |
| | strongly no-desire | 24 | 7 | 6 | 32 | 13 | 9 | 4 | 0 | 95 | |
| | no desire | 47 | 8 | 3 | 30 | 35 | 14 | 6 | 1 | 144 | |
| | neutral desire | 40 | 8 | 8 | 14 | 20 | 12 | 3 | 4 | 109 | |
| | desire | 45 | 13 | 25 | 19 | 41 | 17 | 6 | 6 | 172 | |
| | strongly desire | 18 | 9 | 11 | 16 | 20 | 10 | 7 | 3 | 94 | |
| tattoo | Not thinking about, not sure | 5 | 1 | 2 | 1 | 5 | 3 | 0 | 1 | 18 | 0.000 |
| | strongly no-desire | 102 | 27 | 25 | 45 | 44 | 24 | 16 | 7 | 290 | |
| | no desire | 50 | 15 | 14 | 29 | 50 | 25 | 6 | 1 | 190 | |
| | neutral desire | 11 | 1 | 6 | 7 | 12 | 6 | 4 | 3 | 50 | |
| | desire | 8 | 2 | 8 | 16 | 17 | 5 | 3 | 3 | 62 | |
| | strongly desire | 3 | 1 | 5 | 20 | 6 | 2 | 0 | 1 | 38 | |
| Remo hair l | Not thinking about, not sure | 3 | 1 | 3 | 4 | 3 | 2 | 2 | 2 | 20 | 0.000 |
| | strongly no-desire | 17 | 4 | 5 | 23 | 10 | 5 | 3 | 1 | 68 | |
| | no desire | 25 | 10 | 6 | 32 | 17 | 4 | 4 | 0 | 98 | |
| | neutral desire | 25 | 3 | 3 | 12 | 16 | 7 | 6 | 3 | 75 | |
| | desire | 49 | 12 | 14 | 19 | 42 | 23 | 9 | 1 | 169 | |
| | strongly desire | 60 | 17 | 29 | 28 | 46 | 24 | 5 | 9 | 218 | |
| Whit laser | Not thinking about, not sure | 10 | 6 | 1 | 4 | 11 | 2 | 1 | 2 | 37 | 0.003 |
| | strongly no-desire | 61 | 14 | 19 | 45 | 27 | 20 | 12 | 0 | 198 | |
| | no desire | 66 | 9 | 18 | 37 | 45 | 22 | 4 | 6 | 207 | |
| | neutral desire | 22 | 6 | 3 | 6 | 14 | 8 | 3 | 1 | 63 | |
| | desire | 14 | 5 | 9 | 17 | 20 | 8 | 4 | 3 | 80 | |
| | strongly desire | 6 | 7 | 10 | 9 | 17 | 5 | 5 | 4 | 63 | |

While only the participants' marital status had associated highly significant with desire to do tattoo (p value =0.014) and with desire to do Remove hair by Laser (p value= 0.000) As shown in table (7)

Table (7): association between participants' attitude with their marital status.

| | | Marital status | | | | Total | P- value |
|--------|------------------------------|----------------|--------|--------|--------|-------|----------|
| | | single | single | single | single | | |
| filer | Not thinking about, not sure | 17 | 36 | 4 | 5 | 62 | 0.082 |
| | strongly no-desire | 32 | 106 | 7 | 6 | 151 | |
| | no desire | 54 | 96 | 3 | 8 | 161 | |
| | neutral desire | 37 | 63 | 0 | 4 | 104 | |
| | desire | 29 | 70 | 2 | 11 | 112 | |
| | strongly desire | 15 | 36 | 2 | 5 | 58 | |
| Botox | Not thinking about, not sure | 16 | 33 | 3 | 5 | 57 | 0.342 |
| | strongly no-desire | 54 | 116 | 7 | 8 | 185 | |
| | no desire | 56 | 105 | 4 | 7 | 172 | |
| | neutral desire | 23 | 46 | 0 | 5 | 74 | |
| | desire | 20 | 75 | 2 | 11 | 108 | |
| | strongly desire | 15 | 32 | 2 | 3 | 52 | |
| thread | Not thinking about, not sure | 18 | 34 | 2 | 4 | 58 | 0.390 |
| | strongly no-desire | 64 | 132 | 7 | 11 | 214 | |
| | no desire | 69 | 168 | 4 | 14 | 255 | |
| | neutral desire | 16 | 38 | 1 | 5 | 60 | |
| | desire | 12 | 25 | 2 | 1 | 40 | |

| | | | | | | | |
|----------------------|------------------------------|----|-----|---|----|-----|-------|
| | strongly desire | 5 | 10 | 2 | 4 | 21 | |
| scribe | Not thinking about, not sure | 9 | 18 | 2 | 5 | 34 | 0.207 |
| | strongly no-desire | 16 | 68 | 4 | 7 | 95 | |
| | no desire | 45 | 86 | 3 | 10 | 144 | |
| | neutral desire | 34 | 66 | 4 | 5 | 109 | |
| | desire | 53 | 111 | 3 | 5 | 172 | |
| | strongly desire | 27 | 58 | 2 | 7 | 94 | |
| tattoo | Not thinking about, not sure | 9 | 7 | 1 | 1 | 18 | 0.014 |
| | strongly no-desire | 82 | 190 | 9 | 9 | 290 | |
| | no desire | 60 | 115 | 5 | 10 | 190 | |
| | neutral desire | 13 | 32 | 1 | 4 | 50 | |
| | desire | 15 | 36 | 1 | 10 | 62 | |
| | strongly desire | 5 | 27 | 1 | 5 | 38 | |
| Remove hair by Laser | Not thinking about, not sure | 6 | 9 | 2 | 3 | 20 | 0.000 |
| | strongly no-desire | 12 | 48 | 6 | 2 | 68 | |
| | no desire | 17 | 72 | 2 | 7 | 98 | |
| | neutral desire | 17 | 50 | 2 | 6 | 75 | |
| | desire | 54 | 105 | 4 | 6 | 169 | |
| | strongly desire | 78 | 123 | 2 | 15 | 218 | |
| Whitening by Laser | Not thinking about, not sure | 11 | 21 | 2 | 3 | 37 | 0.548 |
| | strongly no-desire | 49 | 133 | 8 | 8 | 198 | |
| | no desire | 58 | 132 | 3 | 14 | 207 | |
| | neutral desire | 24 | 36 | 1 | 2 | 63 | |
| | desire | 24 | 49 | 2 | 5 | 80 | |
| | strongly desire | 18 | 36 | 2 | 7 | 63 | |

DISCUSSION

In this study, majority (94.3%) of participants claim to know a lot about cosmetic operations. This suggests that a large portion of the surveyed population has some level of familiarity with cosmetic procedures. However, there's a smaller percentage of participants (4.9%) who indicate that they know something about cosmetic operations, but not to a significant extent. It's also worth noting that a very small portion (0.8%) of participants indicated that they don't know about cosmetic operations at all. This study's findings are similar to a study done by Al Hindi et al, 2022 in Saudi Arabia.^[7]

In the current study, regarding the awareness of the presence of cosmetics, a majority of participants (82.4%) claim to know a lot about the presence of cosmetics. A smaller percentage of participants (10.6%) indicate that they know something about the presence of cosmetics. Finally, a subset of participants (6.9%) claims that they don't know about the presence of cosmetics. This study's findings are similar to a study done by Dehvari et al, 2018 in Iran.^[8] The data suggests that cosmetic operations and the presence of cosmetics are topics of relatively high awareness among the current study's participants.

The study reveals diverse attitudes towards cosmetic procedures, with Filler being the most popular and Botox showing polarization. 54% believe Botox and filler operations are safe, while 46% are harmful.

A study found that 44.8% of participants are averse to getting a tattoo, with a smaller but significant segment

interested, while 9.6% express a desire, similar to a 2018 Iraqi study.

The study reveals diverse attitudes towards hair removal and whitening by laser procedures, with one-third of participants strongly interested in hair removal and a balanced mix of sentiments across other categories. The prevalence of laser skin treatments in Saudi Arabia in 2016 reflects the influence of technological advancements on cosmetic practices.

The study reveals that nearly a quarter of individuals are interested in cosmetic procedures, with family and spousal influence being a minor factor. The majority are drawn by the prospect of rejuvenating their appearance. A small percentage are influenced by peers, while 17 percent view them as psychological necessity, while less than 10% see them as physical needs. Over half of participants are averse to cosmetic procedures, with reasons ranging from family and spousal constraints to contentment with natural appearance. Religious beliefs, fear of complications, financial considerations, and perceived unnecessaryness also contribute to their aversion. Despite these reservations, a significant percentage are satisfied with their natural appearance. Interestingly, these findings align with a study conducted by Al Hindi et al., which similarly revealed that the primary reason for not undergoing cosmetic procedures was a sense of satisfaction with one's current appearance.^[7]

The study reveals a strong correlation between age and the desire for filler treatments, Botox injections, thread

treatments, scribing procedures, and laser hair removal. Older individuals prioritize addressing aging signs, preferring filler treatments, Botox, thread procedures, microblading, and laser hair removal. This suggests age plays a significant role in shaping preferences this finding is similar to that of Marwah in 2021 and Kapoor et al., (2021) in India. In the current study highlight a strong relationship between educational level and attitudes towards non-surgical aesthetic procedures among women. This study reveals a noteworthy link between educational level and the desire for filler injections. This finding is similar to that of Dadkhahfar S. et al., (2021) in Iran.^[9] As the current study indicate, women with higher levels of education, particularly those with postgraduate degrees, express a stronger desire for filler injections. This association could be attributed to an increased awareness of aesthetic trends and potential benefits of these procedures among more educated individuals. These findings suggest that educational campaigns and aesthetic professionals should tailor their approach to different educational groups, considering the preferences and motivations unique to each.

Botox, another popular non-surgical procedure, also shows a clear educational divide. Participants with higher education levels are more inclined towards Botox treatments. This finding is similar to that of Scharschmidt et al., (2018) in Germany.^[10] The reasons behind this association may include a better understanding of the procedure's effects, potential advantages, and trust in qualified practitioners among highly educated women. This insight underscores the importance of providing comprehensive information and expert consultations to help women make informed decisions about Botox.

Scribe, which involves skin treatments using specialized pens, displays a substantial connection with educational levels. Women with higher education levels, particularly those with postgraduate degrees, express a stronger desire for scribe treatments. This could be linked to the greater awareness and understanding of the dermatological and aesthetic aspects of this procedure among the more educated participants. The findings suggest that marketing and information dissemination for scribe treatments should target highly educated individuals, emphasizing the safety and benefits of the procedure. Tattooing, laser hair removal, and laser whitening exhibit significant associations with educational levels as well. Highly educated participants are more inclined towards these procedures, possibly due to a better comprehension of the techniques, potential aesthetic benefits, and safety aspects. All of these procedures involve some degree of pain, discomfort, cost, and potential complications. Therefore, it is reasonable to assume that highly educated participants would have a better understanding of the procedures and their outcomes, as well as more confidence and motivation to undergo them.^{[11][12]}

The study reveals that educational background influences aesthetic preferences among Iraqi women, possibly due to societal norms and expectations. Higher-educated women may be more financially capable of pursuing beauty procedures. Occupation also plays a role, with medical staff and academic teachers showing higher inclination towards filler injections, threading, scribe treatments, and tattooing, while housewives express lower desire.

This study revealed that marital status had a highly significant association with the desire to undergo tattoo and remove hair by laser. Single women show stronger tattoo desire compared to married women, similar to Mortensen et al.'s 2008 US study, where 41.0% were married, 9.7% separated, and 49.3% were single.^[13]

CONCLUSION AND RECOMMENDATIONS

These findings carry important practical implications for the aesthetic-cosmetic industry and healthcare professionals. Understanding how motherhood impacts women's preferences for non-surgical aesthetic procedures can help tailor marketing strategies and consultations. For example, clinics may consider offering flexible hours or childcare facilities to accommodate mothers who wish to undergo such procedures. Additionally, the study underscores the need for a more nuanced approach to aesthetic-care consultations. Healthcare providers should be sensitive to the unique needs and considerations of mothers when discussing non-surgical procedures. Conversations should encompass time constraints, financial concerns, and the desire for treatments that align with mothers' lifestyle and beauty goals.

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