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

Sahar A. Esa Al Shatari[1*], Hiba Mohammad[2], Hiba Abdul Razzaq[2]

[1]M.B.Ch. B., FICMS, Ass. Prophesier-Consultant Family Physician, Work In Department of Total Quality Management and Institutional Development, Office of the Minister, Iraqi Ministry of Health.
[2]M.B.Ch. B., FACMS, Specialist Family Physician, Work in Training PHC Centre for Family Health Approach At Bab Al-Moatham, Baghdad, Iraq.

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***Corresponding Author: Sahar A. Esa Al Shatari**
M.B.Ch. B., FICMS, Ass. Prophesier-Consultant Family Physician, Work In Department of Total Quality Management and Institutional Development, Office of the Minister, Iraqi Ministry of Health.

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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 $p<0.05p<0.05$). **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 ($p<0.05p<0.05$). **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 prophesier community medicine, and tow 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 (welling to have aesthetic-cosmetic procedures non-surgical, fuller, Botox, thread-lift, skin scribe, tattoos, removing the skin hair by laser, whiting the skin by laser, and others procedures (mention them). **Fourth part** consists from four question (two about why welling to do aesthetic-cosmetic procedures non-surgical for the female welling that, and two about why not welling to do them for female not welling). 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 ±SD=37.10 ±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)

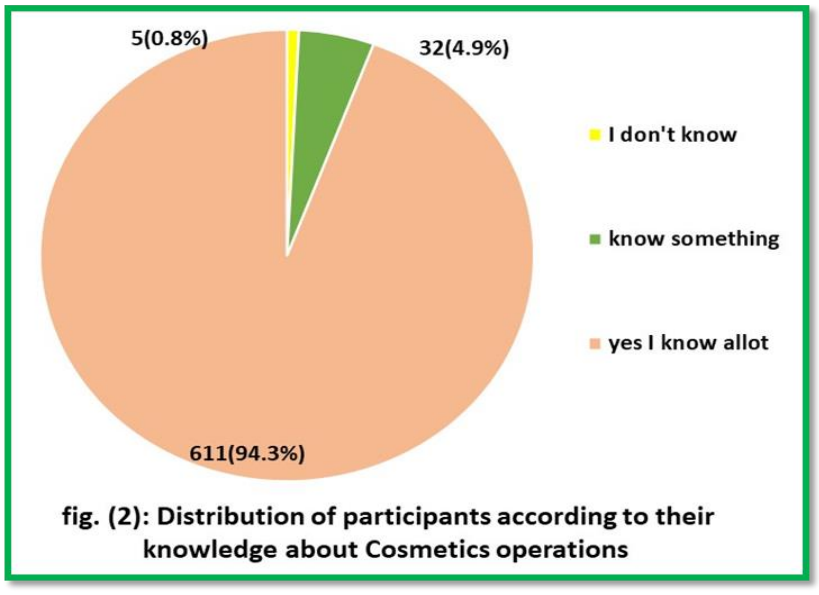

fig. (2): Distribution of participants according to their knowledge about Cosmetics operations

The study found that 24.8% of participants had no desire for filers, 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 welling 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 welling 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 filer, 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 / admonitive/ cleric	student	educational teachers	engineer & others	Total	P value
Total		179	47	60	118	134	65	29	16	648	
filer	Not thinking about, not sure	19	6	5	9	14	7	1	1	62	0.007
	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	
Botox	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	
	Not thinking about, not sure	20	5	5	6	13	3	2	4	58	
	strongly no-desire	63	15	15	38	37	29	13	4	214	
threa	no desire	65	16	30	58	53	24	6	3	255	**0.010**
	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	
	Not thinking about, not sure	5	2	7	7	5	3	3	2	34	
	strongly no-desire	24	7	6	32	13	9	4	0	95	
scrib	no desire	47	8	3	30	35	14	6	1	144	
	neutral desire	40	8	8	14	20	12	3	4	109	**0.001**
	desire	45	13	25	19	41	17	6	6	172	
	strongly desire	18	9	11	16	20	10	7	3	94	
	Not thinking about, not sure	5	1	2	1	5	3	0	1	18	
	strongly no-desire	102	27	25	45	44	24	16	7	290	
tattoo	no desire	50	15	14	29	50	25	6	1	190	
	neutral desire	11	1	6	7	12	6	4	3	50	**0.000**
	desire	8	2	8	16	17	5	3	3	62	
	strongly desire	3	1	5	20	6	2	0	1	38	
	Not thinking about, not sure	3	1	3	4	3	2	2	2	20	
	strongly no-desire	17	4	5	23	10	5	3	1	68	
Remo	no desire	25	10	6	32	17	4	4	0	98	
hair l	neutral desire	25	3	3	12	16	7	6	3	75	**0.000**
	desire	49	12	14	19	42	23	9	1	169	
	strongly desire	60	17	29	28	46	24	5	9	218	
	Not thinking about, not sure	10	6	1	4	11	2	1	2	37	
	strongly no-desire	61	14	19	45	27	20	12	0	198	
Whit	no desire	66	9	18	37	45	22	4	6	207	
laser	neutral desire	22	6	3	6	14	8	3	1	63	**0.003**
	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	
Whitting 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 Filer 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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