

PREVALENCE NON-SURGICAL AESTHETIC-COSMETIC PROCEDURES AMONG IRAQI WOMEN

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ABSTRACT

Background: minimally invasive facial cosmetic surgeries have gained popularity due to their less invasive and traumatic nature, lower incidence of postoperative complications, and faster recovery times. **Aim:** To investigate the prevalence of non-surgical cosmetic procedures among Iraqi women. Additionally, it sought to identify demographic factors associated with undergoing these procedures. **Method:** This is a cross sectional study that included 605 females and was conducted during the period September 21, 2022, to March 21, 2023, using social media groups (Facebook, WhatsApp, Fiber, Telegram) and accessible emails. Any Iraqi woman who residing in Iraq at the study period and took the online survey was included in the study. **Results:** Among 605 women, 225 (37.2%) had history of having cosmetic non- surgical procedures. Botox was the most common procedure 83 (13.7%), followed by filler 65(10.7%), removing hair by laser 34 (5.6%), tattoo 29 (4.8%), scribe 13 (2.1%), thread 10 (1.7%) and whitening by laser 7 (1.2%). Only 25 (11.11%) had complications. Younger women and being divorced were significant predictors of undergoing cosmetic procedures. **Conclusion:** The study reveals that nonsurgical aesthetics are common among Iraqi women, with age and divorce being significant predictors. However, these procedures carry inherent risks. To reduce these risks, educational programs should be conducted to educate Iraqi women about consulting medical experts for treatment.

KEYWORDS: Aesthetic-Cosmetic, knowledge, Attitude.

INTRODUCTION

For individuals without physical abnormalities, minimally invasive facial cosmetic surgeries have gained popularity due to their less invasive and traumatic nature, lower incidence of postoperative complications, and faster recovery times.^[1] Therefore, The non-invasive cosmetic sector has seen substantial growth during the last ten years. Specifically, the use of botulinum toxin (commonly known as 'botox') and dermal filler injections has grown widespread in contemporary culture. Botulinum toxin and dermal fillers were first brought into clinical practice for their therapeutic use, particularly for the treatment of facial spasm and lipoatrophy. Nevertheless, as a result of the evident improvement in face appearance and the capacity to boost facial soft tissue, these non-surgical methods are now being more often used just for cosmetic purposes. According to a study article, there has been a 47% increase in the use of phrases like 'Botox' or 'Lip filler' in popular search engines like Google over the last year.^[2]

The International Society of Aesthetic Plastic Surgery (ISAPS) reported a significant global increase in the number of nonsurgical and total cosmetic operations performed in 2018, with respective increases of 11.7% and 5.1%. The American Society of Plastic Surgeons (ASPS) reported a total of 18.1 million cosmetic treatments in the United States in 2019, with 16.3 million of these being minimally-invasive procedures.^[1] Prior research conducted in China, Pakistan, and Singapore has documented different rates of occurrence for minimally invasive facial cosmetic surgeries (MIFCS) and plastic surgeries among high school and college students. A greater proportion of students have expressed a desire to undergo cosmetic procedures compared to those who have actually undergone them.^[3] These findings suggest a growing trend of cosmetic procedures among young individuals.

Previous research investigating these variables includes a

study conducted in the United Kingdom. This study revealed that the most desired non-invasive procedures included teeth whitening, body hair removal, facial hair removal, improvement of skin texture and appearance, and decrease of acne scars.^[4]

Although office-based, minimally invasive procedures are usually performed safely and effectively. However, even with pristine techniques, there are associated complications that are important to recognize and understand the causes in order to prevent their occurrence or provide appropriate treatment.

This study aims to investigate the prevalence of non-surgical cosmetic procedures among Iraqi women. Additionally, it sought to identify demographic factors associated with undergoing these procedures. The ultimate goal is to utilize this data for educational campaigns. These campaigns would aim to raise awareness among Iraqi women regarding the potential side effects of non-surgical cosmetic procedures. Furthermore, they would emphasize the importance of seeking treatment from board-certified specialists to minimize such risks.

Objective

- 1) To determine the extent to which they use these procedures, and it is established for them by whom
- 2) To determine complications during and after it.

METHODS & PERSONS

Setting and study design

An online poll with an analytical component was undertaken for Iraqi women from September 21, 2022, to March 21, 2023, using social media groups (Facebook, WhatsApp, Fiber, Telegram) and accessible emails. Every lady had the capability to distribute the questionnaire link to her female acquaintances, relatives, and colleagues. In addition, the internet connection was given by the Ministry of Health, the Ministry of Higher Education, and the Ministry of Trade.

Ethical consideration

An agreement sentence explaining the questionnaire was provided prior to the questions.

Definition of the enrolment criteria

Any Iraqi woman who residing in Iraq at the study period and took the online survey was included in the study.

Excluded criteria

Any women who did not complete her online questionnaire.

Sampling methods

by sending out an online questionnaire to Iraqi women via email and social media groups (Facebook, WhatsApp, Fiber, Telegram), with the option for each woman to forward the link to other women in her network (friends, relatives, coworkers).

Outcome

The data were described using frequency and percentage, and the relationship between the dependent and independent variables was examined using the chi square test. Pre-established statistical significance was set at $p < 0.05$.

Details of the questionnaire

The questionnaire was created after reading through a number of published studies and consulting with four specialists (two from the field of pediatrics and two from family medicine consulting). A pilot study was also conducted, with 20 people withdrawn from the study, and all relevant factors were taken into account.

The questionnaire consists from two 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** consisted of 7 questions of previous history of having cosmetic non-surgical procedures, number of procedures and which types (& she can chose more than one type), history of complication, where its done, who did the procedure(s), developing permanent damage.

Statistical analysis

The responses from the Google form are provided as an Excel sheet for analysis after being coded and converted to an SPSS version 26 file.

RESULTS

Six hundred and five females enrolled in this study out of 800 females receiving the google forms with response rate 75.63%, with mean age 37.30 ± 11.905 and the main group 30 -39 years were 188(31.1), complete college/institution 303(50.1%), the medical staff were 178(29.4%), while the non-medical staff 427(70.6%) the majority of them were Employees 144(23.8%), followed by housewives 87(14.4%). The main of the participants were currently married **377(62.3%)**, followed by never married 178(29.4%), and 15(2.5%) previous married.

In concern the number of children; the majority had two-children 130(30.52%), followed by 3 children 111(26.06%). And most of the residency of the participants in Baghdad zone 422(69.8%) followed by Medial zone of Iraq 90(14.9%), south of Iraq 62(10.2%). And the north zone of Iraq 31(5.1%).

Table 1: Distribution of the participants according to the demographic variables.

		Frequency	Percent
Age Mean = 37.30 SD= 11.905	18- 29 years	172	28.4
	30-39 years	188	31.1
	40 -49 years	136	22.5
	50-59 years	87	14.4
	≥ 60 years	22	3.6
Edu. level	Complete primary	35	5.8
	Complete secondary	72	11.9
	Complete college/institution	303	50.1
	postgraduate degree	195	32.2
Job	medical staff	178	29.4
	teachers	75	12.4
	nurse & paramedical staff	60	9.9
	house-wife	87	14.4
	Employees	144	23.8
	student	61	10.1
Monthly income	< half million ID	73	12.1
	half million ID - < one million ID	170	28.1
	one million ID - < one& half million ID	175	28.9
	≥ one & half million ID	187	30.9
Marital status	Never married	178	29.4
	Currently married	377	62.3
	Previous married	15	2.5
Having children N=605	never married	178	29.4
	married without children	40	6.6
	have children	387	64.0
Children N= 427 married females	Married without children	40	16.19
	one child	75	17.56
	two children	130	52.63
	three children	111	26.06
Residency	≥ 4 children	71	16.66
	Baghdad	422	69.8
	South of Iraq	62	10.2
	Medial of Iraq	90	14.9
	North of Iraq	31	5.1

Two-hundred and twenty-five females (37.2%) had history of having cosmetic non-surgical procedures, according to the table (2), the highest percent 79(35.11%)

had once time followed by 51(22.67%) had more than fourth procedure.

Table 2: Distribution of the participants according to history of having of cosmetic non-surgical procedures and numbers of them.

		Frequency	Percent
Did had cosmetic non-surgical procedures N=605	Never done	380	62.8
	Had operation	225	37.2
Operation No. N= 225	once	79	35.11
	twice	51	22.67
	third	42	18.67
	≥ fourth	53	23.55

The study found that highest percent had Botox 83(13.7%), followed by had filer 65(10.7%), then removing hair by laser 34(5.6%), tattoo 29(4.8%),

scribe 13(2.1%), thread 10(1.7%) and whitening by laser 7(1.2%). As shown in table (3).

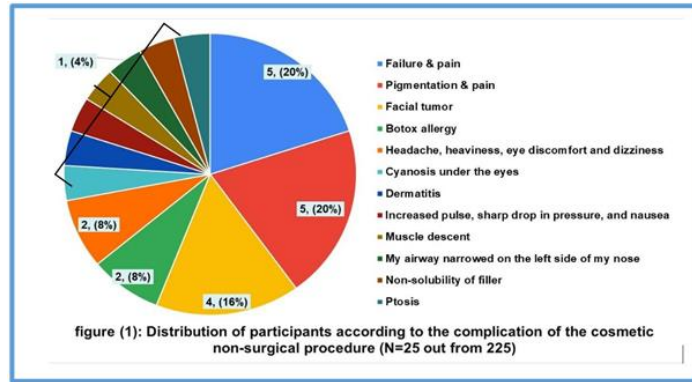
Table 3: Distribution of the participants according to type of the cosmetic non-surgical procedures.

Total =605	Yes	%	No	%
had Botox	83	13.7	522	86.3
had filer	65	10.7	540	89.3
had remove hair by laser	34	5.6	571	94.4
had tattoo	29	4.8	576	95.2
had scribe	13	2.1	592	97.9

had thread	10	1.7	595	98.3
had whitening laser	7	1.2	598	98.8

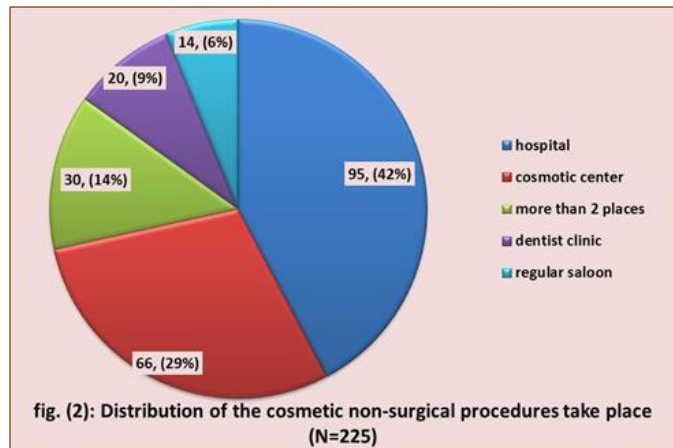
About the complication of these procedures in 225 females, only 25(11.11%) had complication and listed as in **figure (1)**, 5 (20%) for both “failure with pain” & “pigmentation with pain”, to less extend 4(16%) had facial tumor, and 2(8%) for Botox allergy, headache,

heaviness, eye discomfort & dizziness, while 1(4%) for Cyanosis under the eyes, Dermatitis, Increased pulse sharp drop in pressure and nausea, Muscle descent, My airway narrowed on the left side of my nose, Non-solubility of filler, and Ptosis.



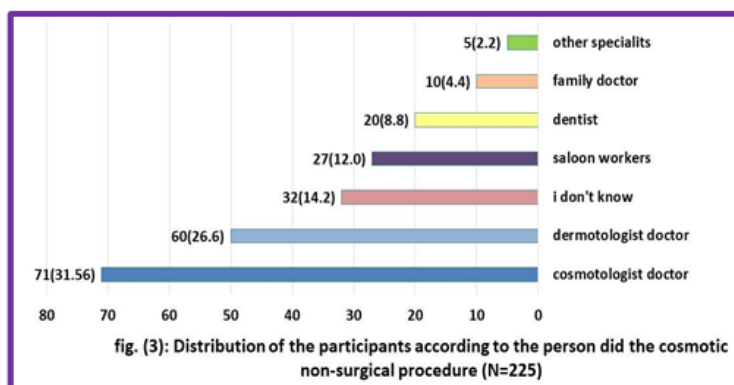
Regarding where the cosmetic non-surgical procedures take place, the major percentage was in the hospitals (public & private) 95(42%), followed by cosmetics

private centers 66(29%), then 30(14%) she had them in difference places, while 20(2.3%) done in dentist clinic and 14(6.20%) regular salon. As appeared in figure (2).



About the person who did the cosmetic non-surgical procedure; the highest percent by cosmetologist doctor in 71(31.56%) participants, and followed by dermatologist doctors in 60(26.6%) participants While 32(14.2%) they

don't know who did the procedure to her, then by saloon worker in 27(12%), by dentist 20(8.8%), followed by family doctors in only 10(4.4%), and lastly by other specialties in 5(2.2%). All that shown in figure (3).



The study revealed highly significant association between having cosmetic non-surgical with the participants age, and marital status (p value 0.000 & 0.010 respectively), but there was no significant association with participants residency, educational

level, Job, monthly income, children number for married or previous married females (p value 0.398, 0.243, 0.187, 0.096 & 0.255 respectively) as presenting in table (4)

Table 4: Association between having cosmetic non-surgical with some participants demographic variables.

		Operation				Total	P value
		No	%	Yes	%		
Total		380	(37.2%)	225	(62.8%)	605	
Age	< 29 years	122	70.93	50	29.07	172	<0.001
	30-39 years	102	54.26	86	45.74	188	
	40 -49 years	73	53.67	63	46.33	136	
	50-59 years	63	72.41	24	27.59	87	
	≥ 60 years	20	90.91	2	9.09	22	
Marital status	single	126	70.39	53	29.61	179	0.010
	married	222	59.04	154	40.96	376	
	widow	13	86.67	2	13.33	15	
	divorce	19	54.29	16	45.71	35	
Residency	Baghdad	273	64.69	149	35.31	422	0.398
	South of Iraq	34	54.84	28	45.16	62	
	Medial of Iraq	53	58.89	37	41.11	90	
	North of Iraq	20	64.52	11	35.48	31	
Edu level	Complete primary	21	60.00	14	40.00	35	0.243
	Complete secondary	46	63.89	26	36.11	72	
	Complete college/institution	201	66.34	102	33.66	303	
	postgraduate degree	112	57.44	83	42.56	195	
Job	medical staff	101	56.74	77	43.26	178	0.187
	teachers	53	70.66	22	29.33	75	
	nurse & paramedical staff	39	65.00	21	35.00	60	
	house-wife	57	65.52	30	34.48	87	
	financial / admonitive/ cleric	78	60.94	50	39.06	128	
	student	44	72.13	17	27.87	61	
	engineer & others	8	50.00	8	50.00	16	
Monthly income	< half million ID	51	69.86	22	30.14	73	0.096
	half million ID - < one million ID	115	67.65	55	32.35	170	
	one million ID- <one& half million ID	108	61.71	67	38.29	175	
	≥ one & half million ID	106	56.68	81	43.32	187	
Children present N=426 only	Married without children	27	69.24	12	18.46	39	0.255
	one child	45	60.00	30	40.00	75	
	two children	83	63.85	47	36.15	130	
	three children	57	43.85	54	56.15	111	
	≥ 4 children	45	63.38	26	36.62	71	

DISCUSSION

This study found a prevalence of 37.2% for non-surgical cosmetic procedures among Iraqi women. This is in concordance with the study conducted by Alhawal et al. in Syria who reported a prevalence of 40%.^[5] AIMasri et al. reported 55.4% of Saudi women underwent such procedures.^[6] Whereas another study conducted by Bondagji et al. in the more conservative western region of Saudi Arabia revealed that only 8.4% of participants underwent such procedures.^[7] The variation can be ascribed to different variables, such as cultural variety and the prevalent utilization of social media in our local society.

Conversely, the rate of noninvasive cosmetic treatments

among women in the United States was found to be 24.1%. This can be related to the fact that many women in the United States opt for invasive procedures like lipoplasty and breast augmentation, as reported by the International Society of Aesthetic Plastic Surgeons.^[8]

Regarding the type of aesthetic procedure, our study found that botulinum toxin injection was the most common, followed by filler injection. According to Sindi et al. in Saudi Arabia, women expressed the highest desire for forehead anti-wrinkle injections and lip augmentation operations for the head and face,^[9] which is in agreement with our study. Alhawal et al. reported that hair laser removal was the most common (30%),

followed by lip filling (13%), and botulinum toxin injection of the forehead (13%).^[5] Bondagji et al. reported that among non-surgical aesthetics; filler injection was the commonest (57.5%), followed by botox (46.6%), laser hair removal (34.6%), non-surgical liposuction (24.5%), and laser skin regeneration (7.7%).^[7]

This study identified age as a significant predictor for undergoing an aesthetic procedure, with the 30-39 year old and 40-49 year old age groups demonstrating the highest prevalence. Sayegh et al. observed a similar discovery, noting that women over the age of 35 exhibited greater acceptance of both cosmetic surgery and non-surgical therapies.^[10] This could be attributable to aging-related changes in the skin that are common in older populations.

Surprisingly; divorced were significantly more likely to undergo non-surgical aesthetics, followed by married women. Whereas single women showed significantly lower prevalence. This phenomenon can be attributed to the prevalent idea among women that physical attractiveness plays a crucial role in securing a marriage. Consequently, women may feel compelled to enhance their physical appearance in order to ensure a prosperous marital relationship. Presumably, the participants had the notion that improving their physical appearance would result in improved opportunities for relationships and marriage. It would be intriguing to further investigate the psychosocial elements that contribute to this tendency in greater depth in the future.

On the other hand Sayegh et al. reported that divorced women were significantly less likely to undergo such procedures^[10], which is in discordance with our study. Almasri et al. reported that single and married women significantly tended to repeat cosmetic procedures more than once, whereas divorced and widowed women showed the least interest.^[6]

Regarding side effects, they were very minor and temporary. Pain and swelling were the most common noticed adverse events. This aligns with the research conducted by Qureshi et al., in which 50 patients were enrolled. The study findings indicate that one patient experienced significant bruising, two patients had moderate swelling, one patient had moderate itching, and one patient had moderate headaches after the procedure. The remaining participants either had minimal or no symptoms.^[11]

A noticeable and worrisome finding of our study is that more than third of procedures were conducted either by saloon worker, dentists, or workers whose professional qualifications were undisclosed to the patients. This practice constitutes a violation of regulations established by both the Iraqi Ministry of Health and the Iraqi Doctors Syndicate.

CONCLUSION & RECOMMENDATION

Based on the findings of the current study, nonsurgical aesthetics are common procedures among Iraqi women. Age (30-50 years old) and being divorced emerged as significant predictors for undergoing these procedures. Nevertheless, it is imperative to recognize that non-surgical cosmetic techniques carry inherent risks. Hence, it is necessary to conduct educational programs in order to enhance the knowledge of Iraqi women about the significance of consulting authorized medical experts for treatment. This strategy can successfully reduce potential hazards and guarantee the safety of patients.

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