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The Effect of Sociodemographic Variables, Body Image and Self-Esteem on Undergoing Minimally Invasive Cosmetic Procedures in Turkish Women: Cross-Sectional Research

Türk Kadınlarında Sosyodemografik Değişkenler, Vücut İmajı ve Benlik Saygısının Minimal İnvaziv Kozmetik İşlem Yaptırma Üzerine Etkisi: Kesitsel Araştırma

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ABSTRACT Objective: Previous studies conducted in different populations have stated that demographical and psychological factors such as low self-esteem and body image are important motivations to undergo minimally invasive cosmetic procedures. This study investigates these factors that are expected to predict motivation for such procedures in Turkish women. **Material and Methods:** The study was conducted in August 2020 using an online survey with the virtual snowball method. The participants completed a questionnaire that investigated their sociodemographic variables, psychiatric disorder history, cosmetic procedures, motivation sources; including questions from the Rosenberg Self-Esteem and Body-Cathexis Scale. **Results:** The data of 1,244 women were included. 62% have had some sort of cosmetic procedure. The most commonly performed was laser procedures (79.5%). The most important source of information and motivation was doctors. There was a positive correlation among increasing age, graduating university, having a job, having a high monthly income, and the rate of cosmetic procedures. The presence of a psychiatric disease did not decrease this rate. While there was no correlation between body perception, self-esteem scores and the total rates of cosmetic procedures, the self-esteem scores of those who had botulinum toxin injection, dermal fillers, and platelet-rich plasma were higher than those who had other procedures. **Conclusion:** This study provides information about psychosocial factors that predict interest in minimal cosmetic procedures. Unlike previously known predictors, body image and self-esteem were not effective. The results may contribute to a better understanding of the factors that may be motivational for undergoing cosmetic procedures.

Keywords: Cosmetics; self-concept; body image; cosmetic techniques

ÖZET Amaç: Farklı toplumlarda yapılan önceki çalışmalar demografik özellikler ve düşük benlik saygısı ve vücut imajı gibi psikolojik faktörlerin minimal invaziv kozmetik işlem yaptırmak için önemli motivasyonlar olduklarını göstermiştir. Bu çalışma Türk kadınlarında bu işlemler için motivasyonu öngörmesi beklenen faktörleri araştırmaktadır. **Gereç ve Yöntemler:** Çalışma, Ağustos 2020 tarihinde kartopu yöntemiyle çevrim içi bir anket kullanılarak yapıldı. Katılımcılar; sosyodemografik değişkenleri, psikiyatrik hastalık öyküsünü, uygulanan kozmetik işlemleri, motivasyon kaynaklarını araştıran; Rosenberg Benlik Saygısı ve Beden Algısı Değerlendirme Ölçeği'ne ait soruları içeren bir anketi doldurdular. **Bulgular:** Çalışmaya 1.244 kadının verileri dâhil edildi. Katılımcıların %62'si herhangi bir minimal kozmetik işlem yaptırmıştı. En fazla yaptırılan kozmetik işlem lazer uygulamaları idi (%79,5). Kozmetik işlem yaptırmak için en önemli bilgi ve motivasyon kaynağı doktorlardı. Artan yaş, üniversite mezunu olmak, meslek sahibi olmak, aylık gelir düzeyinin yüksek olması ile kozmetik işlem yaptırma oranları arasında pozitif korelasyon vardı. Psikiyatrik hastalık varlığı kozmetik işlem yaptırma oranlarını azaltmadı. Beden algısı ve benlik saygısı puanlarıyla minimal kozmetik işlem yaptırma toplam oranları arasında herhangi bir korelasyon bulunmazken, botulinum toksin enjeksiyonu, dermal dolgu ve trombositten zengin plazma yaptırmış olanların benlik saygısı puanları diğer işlem yaptıranlara nazaran daha yüksekti. **Sonuç:** Bu çalışma, minimal kozmetik işlemlere ilgiyi öngören psikososyal faktörler hakkında bilgiler sunmaktadır. Önceden bilinen öngörücülerden farklı olarak, beden algısı ve benlik saygısının minimal kozmetik işlem yaptırma üzerinde etkili olmadığı tespit edilmiştir. Sonuçlar, kişileri kozmetik işlem yaptırmaya motive edebilecek faktörlerin daha iyi anlaşılmasına katkıda bulunabilir.

Anahtar Kelimeler: Kozmetik; benlik kavramı; beden imajı; kozmetik teknikler

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Cosmetic procedures have been a source of intense interest, especially among women, in today's world. It is thought that the interaction of psychological, demographic and socio-cultural factors plays a role in undergoing cosmetic interventions. The messages given by television and social media related to the body, the appreciation of a particular physical appearance by the society, the concept of beauty being at the forefront, and the ease of accessibility to cosmetic procedures can cause people to become more interested in their bodies and to make changes.[1,2] Minimally invasive cosmetic procedures such as botulinum toxin (BT) injection, dermal filling and chemical peeling are among the most common non-surgical cosmetic procedures.[1,3]

In recent years, many studies on patients who have been interested in or applying for cosmetic procedures have investigated individuals' perceptions of cosmetic procedures as well as their motivation and interest in seeking them.[3-6] In general, according to the inference obtained from these studies, it has been observed that a certain degree of body image and self-esteem dissatisfaction is a key motivation in undergoing cosmetic procedures.

Body image indicates personal observations, feelings, thoughts and, perceptions about one's own body. Self-esteem is basically defined as self-satisfaction and confidence. Self-esteem allows people to believe that they have the right to be happy, successful and deserving the life's gifts, as well as the power to cope with life's difficulties.[7] Self-esteem and body perception are interrelated and are affected by each other in a cause-effect relationship.[1,8] Body image distortions may cause a decrease in self-esteem and quality of life. Consequently, youth and beauty provided by minimally invasive cosmetic procedures can increase personal satisfaction by improving body perception.[9] On the other hand, excessive body image dissatisfaction is an important factor that should be looked out for since it is a symptom of body dysmorphic disorder, which is a contraindication to cosmetic surgery.[6]

Despite the growing increase in the number of people demanding minimally invasive cosmetic procedures in Turkey as in the world, there has been found no study investigating the demographic and psychological motivation sources that lead people to these procedures. In this study, it was aimed to test whether there is a relationship between the applying to a cosmetic unit and the sociodemographic variables, body perception level and self-esteem that may be associated with it.

MATERIAL AND METHODS

This study is a cross-sectional study and it was approved by the ethics committee of İnönü University Medical Faculty (28/07/2020, 2020/1012). The study was carried out in accordance with the Helsinki Declaration. Women over the age of 18, who were planned to participate in the study, were determined by using the virtual snowball sampling method and were invited to participate in an online survey. Data acquisition was stopped when the target sample size was reached within three consecutive days.

The participants who were informed about the study and accepted to participate were asked to fill out a questionnaire for age, education level, marital status, having children, profession, history of psychiatric disorder, applied cosmetic procedures, and Rosenberg Self-Esteem Scale (RSES) and Body-Cathexis Scale (BCS).

RSES: It is developed by Rosenberg in 1965.[10] The scale, which consists of 12 subscales, includes 63 items. In this study, ten items consisting of self-esteem subscale was used. The scale, adapted to Turkish by Çuhadaroğlu, is a 4 point Likert scale *(Çuhadaroğlu F. Self-esteem in adolescents [Unpublished Specialty Thesis]. Ankara: Hacettepe University; 1986.)*. To evaluate the test, the scoring for items 1, 2, 4, 6 and 7 was as follows: Very true=4, True=3, False=2, Very false=1; while for items 3, 5, 8, 9, and 10 as: Very true=1, True=2, False=3, Very false=4. The score that can be obtained from the scale varies between 10 and 40.[11] The increase in score shows the high self-esteem of the individual *(Çuhadaroğlu F. Self-esteem in adolescents [Unpublished Specialty Thesis]. Ankara: Hacettepe University; 1986.)*. Cronbach alpha was 0.84 in the original study of the scale and 0.71 in the Turkish adaptation study.[12]

BCS: This scale was developed by Secord and Jourard in 1953, and is a scale that determines an in-

dividual's satisfaction of his/her 40 different body parts or their functions.[13] The reliability and validity of the tool for Turkish version were made by Hovardaoglu in 1990 *(Hovardaoğlu S, Özdemir YD. Reliability and validity study of Body Image Scale/ Satisfaction levels in body images of schizophrenic and major depressive patients [Unpublished master's thesis]. Ankara: Gazi University; 1990.)*. The form of the scale is a 5-point Likert scale consisting of 40 items. The most positive statement gets 1 point, the most negative statement gets 5 points (1=I really like 2=I quite like it, 3=I am indecisive, 4=I do not like it very much, 5=I do not like it at all). Accordingly, the lowest total score that can be obtained is 40, and the highest total score is 200. An increase in the total score obtained from the scale indicates a decrease in the satisfaction with the body parts or function, and a decrease in the score indicates an increase in satisfaction.

IBM SPSS Statistics 26.0 (IBM Corporation, USA) software was used for the analysis. Descriptive analyses were performed for sociodemographic data in the study. Quantitative data were given as median (minimum-maximum) or mean (standard deviation) and qualitative data were given as numbers (percentages). Conformity to normal distribution was made using the Shapiro-Wilk test. Mann-Whitney U test, Independent Sample t-test, Kruskal-Wallis H test, Pearson chi-square test, Eta and Cramer V coefficient were used in statistical analyzes. Bonferroni corrected Pearson's chi-square test was used to examine the difference between categories of categorical variables. A p value of <0.05 was considered statistically significant. While determining the age range, age groups were divided into three groups as 18-25, 26-49 and ≥50 based on the data that the average age at marriage is 24.8 for women and the upper limit of fertility age is 49 according to Turkish Statistical Institute.[14] Besides, the Cronbach alpha was estimated for a measure of internal consistency of how closely a set of items were related in the present study.

RESULTS

A total of 1,244 women with a mean age of 37.15±10.27 (minimum=18, maximum=69) years participated in the study. The mean age of the participants who had cosmetic procedures was 37.41±9.48 (minimum=18, maximum=67), while the mean age of those who did not have cosmetic procedures was 37.12±11.26 (minimum=18, maximum=69) (Mann-Whitney U test; p=0.84).

Of the participants, 66.1% were married and 27.0% were single. While 1,036 (83.27%) of the participants were university graduates, the number of primary school graduates was 15 (1.2%). While 780 of the participants (62.7%) stated that they had some sort of cosmetic procedure, 464 (37.3%) did not have any. There was a positive correlation between the increase in education level and the rate of undergoing cosmetic procedures (Pearson chi-square test; p<0.001, r=0.239).

Of the unemployed people, 45.2% and of the retirees 43.9% had some sort of cosmetic procedure, and the difference between them was statistically significant. When the participants were re-analyzed as actively working, not working, and students, a positive correlation was found between working and having a cosmetic procedure (Pearson chi-square test; p<0.001, r: 0.192).

There was no statistical difference between the groups in terms of undergoing a cosmetic procedure and marital status (Pearson chi-square test; p>0.05).

While 813 of the participants had children, the rate of undergoing cosmetic procedures in this group was 62.5%, while this rate was 63% for the participants who did not have children (n=431) and there was no statistical difference between them (Pearson chi-square test; p>0.05).

Considering their monthly incomes, the difference between the groups was statistically significant (Pearson chi-square test; p<0.001), and there was a positive correlation between the increase in income level and the rate of undergoing cosmetic procedures (Pearson chi-square test; p<0.001, r: 0.197).

While the difference between the groups was statistically significant related to information sources about cosmetic procedures, there was a positive correlation between having a doctor or a beautician/ esthetician as the information source and undergoing a procedure (Pearson chi-square test; p<0.001, r=0.222). No correlation was found between the other

TABLE 1: Distribution and relationship of sociodemographic variables and having cosmetic procedure rates.

Variables	Variable categories	Have any cosmetic procedures been applied? Yes n	Yes %	No n	No %	Total n	p value* (r)
Age	18-25	91[a]	52.0	84[b]	48.0	175	**0.002**
	26-49	602	65.4	318	36.4	920	(0.101)
	≥50	87	58.4	62	41.6	149	
Marital status	Single	214	63.7	122	36.3	336	0.057
	Divorced	51	73.9	18	26.1	69	
	Widowed	7	41.2	10	58.8	17	
	Married	508	61.8	314	38.2	822	
Education	Primary school graduate	2[a]	13.3	13[b]	86.7	15	**<0.001**
	Middle school graduate	5[a]	21.7	18[b]	78.3	23	(0.239)
	High school graduate	73[a]	42.9	97[b]	57.1	170	
	University graduate	700[a]	67.6	336[b]	32.4	1,036	
Profession	Unemployed (e.g. housewives)	85[a]	45.2	103[b]	54.8	188	**<0.001**
	Retired	18[a]	43.9	23[b]	56.1	41	(0.228)
	Worker	20[a]	50.0	20[a]	50.0	40	
	Civil servant (teacher, military officer, police, doctor, judge, etc.)	464[a]	68.9	209[b]	31.1	673	
	Student	59[a]	48.8	62[b]	51.2	121	
	Self-employed (craftsman, private sector employee, etc.)	134[a]	74.0	47[b]	26.0	181	
Work status	Unemployed	85[a]	45.2	103[b]	54.8	188	**<0.001**
	Employed	636[a]	68.0	299[b]	32.0	935	(0.192)
	Student	59[a]	48.8	62[b]	51.2	121	
Having children	Do not have children	272	63.1	159	36.9	431	0.853
	Have children	508	62.5	305	37.5	813	
Monthly income	Below minimum wage (<2,300 TL)	81[a]	49.7	82[b]	50.3	163	**<0.001**
	2,300-5,000 TL	218[a]	54.0	186[b]	46.0	404	(0.197)
	5,000-10,000 TL	294[a]	68.5	135[b]	31.5	429	
	≥10,000 TL	187[a]	75.4	61[b]	24.6	248	
Presence of psychiatric disorder	No	654	63.0	384	37.0	1,038	
	Yes	126	61.2	80	38.8	206	
Information source on cosmetic procedures	TV-radio-newspaper-magazines	24[a]	53.3	21[a]	46.7	45	**<0.001**
	Friend and/or social environment	187[a]	55.2	152[b]	44.8	339	(0.222)
	Doctor	266[a]	78.9	71[b]	21.1	337	
	Social media (Twitter, Facebook, WhatsApp, Instagram, etc.)	160[a]	52.8	143[b]	47.2	303d	
	Beautician/Esthetician	126[a]	70.4	53[b]	29.6	179	
	Pharmacist	17[a]	41.5	24[b]	58.5	41	

*Pearson's chi-squared test. In each row, different superscripts indicate statistical significance (p<0.05); r: Cramer V correlation coefficient.

sources of information and having cosmetic procedure rates. The detailed distribution and relationship between sociodemographic variables of the participants and the rates of cosmetic procedures are shown in Table 1.

The self-esteem and body perception scores regarding cosmetic procedures are shown in Table 2. There was no statistical difference in self-esteem scores (p=0.390) between those who had cosmetic procedures or those who did not. Similarly, no significant difference was detected in body image scores (p=0.681) between those who have undergone cosmetic procedures and those who have not.

While the total self-esteem scale scores were positively correlated with increased age, being married, having children, higher education level and higher monthly income, it was negatively correlated with the presence of a psychiatric disorder. Body perception total scores were negatively correlated with the presence of psychiatric disorder, but were not affected by other variables. The relationships of sociodemographic variables with self-esteem and body perception are shown in Table 3.

The most common cosmetic procedure applied by the participants was laser procedure (hair epilation, skin rejuvenation, vascular) (79.5%). This was followed by BT injection with 277 (35.5%), peeling with 138 (17.7%), filling with 131 (16.8%), and platelet-rich plasma (PRP) with 113 (14.5%). The distribution of cosmetic procedures according to sociodemographic variables of the participants are shown in Table 4.

While 1,038 of the participants had no psychiatric disorder, 206 (16.6%) had a psychiatric disorder. When the participants with and without a disorder were compared, there was no difference between the groups in terms of having cosmetic procedures (Pearson chi-square test; p=0.636). No statistically significant difference was found between patients with a psychiatric disorder in undergoing any cosmetic procedure (Pearson chi-square test; p=0.74). Table 5 shows the distribution of psychiatric disorders in terms of cosmetic procedure application.

In the analysis performed in terms of self-esteem and body image scale scores of those who had cosmetic procedures, the self-esteem scale scores of those who had BT injection, dermal fillers and peeling were found to be significantly higher than those who did not (p<0.003, p <0.003, p <0.037, respectively). Self-esteem and body perception scores based on the cosmetic procedures are given in Table 6.

The Cronbach alpha coefficient was 0.872 for RSES, and 0.930 for BCS in the current study, respectively. The values calculated were acceptable for the items of the RSES and BCS.

DISCUSSION

In this study, the effect of sociodemographic variables, body perception and self-esteem on undergoing cosmetic procedures was studied in women over 18 years of age. Technical advances, lower procedure costs, higher patient incomes, more general practitioners providing these services, and less postoperative interruptions combined with increasing public

TABLE 2: The self-esteem and body perception scores regarding cosmetic procedures.

	Have any cosmetic procedures been applied?			
	Yes	No	Total	p value*
Scores	Mean±SD [Median (minimum-maximum)]	Mean±SD [Median (minimum-maximum)]	Mean±SD [Median (minimum-maximum)]	
Self-esteem total score	33.60±4.90 [33.0 (15-40)]	32.31±5.00 [32.0 (11-40)]	32.50±4.94 [33.0 (11-40)]	0.390
Body perception total score	141.47±23.12 [141.0 (74-199)]	142.10±24.77 [142.0 (54-200)]	141.71±23.74 [142.0 (54-200)]	0.681

*Mann-Whitney U Test; SD: Standard deviation.

TABLE 3: Relationships sociodemographic variables with self-esteem and body perception.

Variables	Variable categories	Self-esteem total score p (r)	Body perception total score p (r)
Undergoing any cosmetic procedure	No	0.390*	0.681*
	Yes		
Age	18-25	<0.001** (0.238)	0.101**
	26-49		
	≥50		
Marital status	Single	0.008** (0.243)	0.070**
	Divorced		
	Widowed		
	Married		
Education	Primary school graduate	<0.001** (0.185)	0.298**
	Middle school graduate		
	High school graduate		
	University graduate		
Having children	Do not have children	<0.001* (0.218)	0.258*
	Have children		
Monthly income	Below minimum wage (<2,300 TL)	<0.001** (0.231)	0.418**
	2,300-5,000 TL		
	5,000-10,000 TL		
	≥10,000 TL		
Working status	Unemployed	<0.001** (0.229)	<0.047** (0.332)
	Employed		
	Student		
Presence of a psychiatric disorder	No	<0.001* (0.280)	0.004* (0.354)
	Yes		

*Mann-Whitney U test; **Kruskal-Wallis H test; r: Eta correlation coefficient (Only significant correlations are reported on the table).

awareness have contributed to the increase in cosmetic procedures over the last decade.[15]

As a matter of fact, the fact that approximately 62% of the participants included in our study having a cosmetic procedure supported these data. Laser procedures were found to be the most applied procedure by the participants. However, in our study, laser procedures such as laser epilation, skin rejuvenation and, vascular laser etc. were not discussed separately and were questioned under a single heading. Although this is a limitation, this high rate may be due to the high rates of laser hair removal and its relatively lower cost compared to other cosmetic procedures. Thus, the fact that laser procedures are the most frequently performed in almost all economic statuses and that BT injection, fillers and PRP are mostly applied in those with high economic status supports our view.

It is known that education, economic level and age are effective in applying for cosmetic procedures and building high self-esteem.[15-17] In our study, a linear relationship was found between undergoing cosmetic procedures and middle-aged, highly educated, and mostly employed people, similar to the study conducted by Scharschmidt et al. in the German population.[3] It was observed that the rates of cosmetic procedures increased especially between the ages of 26-49, and were lower in other age ranges. This age range, which shows activity in the social and professional fields, can be interpreted as a period in which the participants are exposed to more competition in these areas, the possibility of having increased expe-

TABLE 4: The distribution of cosmetic procedures according to sociodemographic variables of the participants.

Variables	Variable categories	BT injection (n=277)		Dermal fillers (n=131)		Laser (n=620)		Peeling (n=138)		PRP (n=113)	
Age	18-25	5	1.8	7	5.3	83	13.4	17	12.3	5	4.4
	26-49	226	81.6	99	75.6	487	78.5	102	73.9	82	72.6
	>49	46	16.6	25	19.1	50	8.1	19	13.8	26	23
Monthly income	≥10,000 TL	115	41.5	49	37.4	122	19.7	42	30.4	42	37.2
	5,000-10,000 TL	111	40.1	46	35.1	241	38.9	47	34.1	40	35.4
	2,300-5,000 TL	44	15.9	32	24.4	188	30.3	37	26.8	25	22.1
	Below minimum wage (<2,300 TL)	7	2.5	4	3.1	69	11.1	12	8.7	6	5.3
Psychiatric disorder	Anxiety disorder	19	6.9	13	9.9	47	7.6	21	15.2	10	8.8
	Depression	24	8.7	9	6.9	40	6.5	10	7.2	10	8.8
	Psychotic disorders	6	2.2	2	1.5	7	1.1	6	4.3	1	0.9
	None	228	82.3	107	81.7	526	84.8	101	73.2	92	81.4
Information source on cosmetic procedures	Friend and/or social environment	73	26.4	32	24.4	138	22.3	25	18.1	16	14.2
	Doctor	143	51.6	65	49.6	199	32.1	60	43.5	63	55.8
	Pharmacist	3	1.1	1	0.8	14	2.3	2	1.4	2	1.8
	Cosmetician/Esthetician	17	6.1	12	9.2	111	17.9	24	17.4	16	14.2
	Social media	36	13	17	13.0	139	22.4	23	16.7	14	12.4
	TV/Radio/Media	5	1.8	4	3.1	19	3.1	4	2.9	2	1.8

BT: Botulinum toxin; PRP: Platelet-Rich Plasma.

TABLE 5: Distribution of psychiatric disorders in terms of cosmetic procedure application.

Variables	Variable categories	Have any cosmetic procedures been applied?				Total		p value*
		Yes		No				
		n	%	n	%	n	%	
Psychiatric disorder	Anxiety disorder (Panic disorder, obsessive-compulsive disorder, social phobia, etc.)	64	50.8	30	37.5	94	45.6	0.74
	Depression	52	41.3	46	57.5	98	47.6	
	Psychotic disorders (Schizophrenia, delusional disorder, etc.), bipolar disorder	10	7.9	4	5	14	6.8	

*Pearson's chi-squared test. In each row, different superscripts indicate statistical significance (p<0.05).

rience in cosmetic procedures increases, and increased financial opportunities required for cosmetic procedures are provided. It seems that having a high status in society has increased self-esteem and positively affected the rate of people having cosmetic procedures.

In this study, 16.6% of the participants stated that they were diagnosed with a psychiatric disorder. 61.2% of these patients had cosmetic procedures and their rates were equal among the anxiety, depression and psychotic disorder groups. Although self-esteem in these people was lower than the others, the rate of undergoing cosmetic procedures was equal to them. This result points to the possibility that mental health patients resort to cosmetic procedures as a way to increase their psychological well-being. Although our study could not fully explain the reason for this, it agrees with the view of the need to obtain a general psychiatric history at the first consultation.[3]

TABLE 6: Self-esteem and body perception scores based on the cosmetic procedures.

Variable	Category	Self-esteem score Mean±SD [Median (minimum-maximum)]	p value	Body perception score Mean±SD [Median (minimum-maximum)]	p value
BT injection	Yes	33.24±5.11 [34.0 (19-40)]	0.003*	141.79±24.62 [142.0 (80-199)]	0.666*
	No	32.25±4.75 [32.0 (15-40)]		141.30±22.86 [142.0 (66-200)]	
Dermal fillers	Yes	33.73±4.73 [34.0 (22-40)]	0.003*	144.61±23.36 [146.0 (87-199)]	0.094**
	No	32.38±4.91 [32.0 (15-40)]		140.84±23.03 [141.0 (74-199)]	
Laser	Yes	32.71±4.83 [33.0 (15-40)]	0.428*	142.26±22.77 [142.0 (74-199)]	0.169**
	No	32.19±5.16 [33.0 (17-40)]		138.41±24.25 [140.0 (80-199)]	
Peeling	Yes	32.91±5.28 [33.0 (17-40)]	0.350*	142.45±23.70 [143.0 (84-199)]	0.808*
	No	32.54±4.82 [33.0 (15-40)]		141.26±23.00 [141.0 (74-199)]	
PRP	Yes	33.48±4.90 [34.0 (22-40)]	0.037*	144.90±24.06 [147.0 (84-199)]	0.121*
	No	32.46±4.89 [32.0 (15-40)]		140.89±22.92 [141.0 (74-199)]	

*Mann-Whitney U test; **Independent Samples t-test; SD: Standard deviation; BT: Botulinum toxin; PRP: Platelet-rich plasma.

Today, mass media such as fashion, health and beauty magazines; social media, televisions, and advertisements continuously send messages about what ideal women should look like, creating constant pressure on people to undergo surgical or non-surgical cosmetic procedures. Although there are different results in the literature, the general opinion is that the media creates a motivation for being the ideal woman.[18,19]

Contrary to this opinion, our study found that the rate of people being influenced by the media is relatively low. The fact that the participants were not affected by such high media pressure suggested that they were either unaware or denied that they were affected by this pressure, or they developed a negative stance against the mostly unregulated advertisements in the media.

In their study, Sobanko et al. found that knowing someone who had cosmetic procedure increased the interest in cosmetic procedures and the rate of having the procedure.[15] However, in our study, the participants stated that they got the information and motivation mostly from their doctors about the cosmetic procedures and that the rate of being affected by someone who had cosmetic procedures was low. It was also found that the participants who received information from their physicians also more readily complied with their advice about having a procedure. In other words, people had more confidence in those they saw as more educated about the subject. These results have led to the idea that the source of motivation for cosmetic application is not always environmental factors, and that the main source of motivation may be instinct and sense of trust.[20]

While it was stated in previous studies that body image dissatisfaction was an essential source of motivation for those who had cosmetic procedures, our study did not provide data to support this finding.[21-23]

In our study, although the appearance satisfaction of all participants was relatively low, it was not found to be an influential factor for undergoing cosmetic procedures. However, while there is no difference between the body perception scores of those who had cosmetic procedures and those who did not; it was observed that self-esteem was higher in those who had BT injection, dermal fillers and PRP compared to those who did not, and did not change in those who had laser procedure and peeling, although we did not know the exact time for these procedures. This result may support findings increase in self-esteem in patients treated with BTA as in the study of Dayan et al.[24] Besides, in addition to this study, we found that PRP and dermal fillers had a positive contribution to self-esteem. Our data could not provide a causal explanation for this result. This result may be related to the fact that these procedures have a more pronounced and rapid effect on visuality compared to other procedures. Perhaps these procedures, which enable the disappearance of age-related skin changes such as age spots and facial lines, interrupt a proprioceptive feedback loop to the emotional brain from the face, thus reducing the ability to feel negative emotions, and causing people to feel good.[25] These procedures may be operating at a biochemical level at which the neurotransmitters contributory for mood are affected.[24] Alternatively, participants having high income, education and profession may get these procedures as the result of self-esteem. Nevertheless, further studies are required to explain the precise mechanism of this action.

There were some limitations regarding this study. The factors related to the application of cosmetic procedures were not investigated in terms of addressing health, sexual attraction, and marital problems etc. Another limitation is that since the study design was cross-sectional, it prevented the time and frequency of the procedures performed and the evaluation of their psychiatric conditions before and after the procedures. Additionally, the calculated correlation coefficients were low; but statistically significant. If the sample size is much larger than in this study, the obtained coefficients may be significant and so high. We believe that our study can lead to long-term follow-up studies that will also include men, taking these limitations into account in the future.

CONCLUSION

Consequently, the results of our survey conducted using random sampling from 1,244 women showed that appearance satisfaction did not affect the experience of cosmetic procedures, while BT injection, fillers and PRP increased self-esteem. On the other hand, age, profession, high monthly income level and high education level were found to be the most important determinants for undergoing cosmetic procedures. Besides, these data can help clinicians to better understand why their patients undergo cosmetic interventions, provide better counselling, and better manage their expectations.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Neslihan Cansel, Nihal Altunışık;* ***Design:*** *Neslihan Cansel, Emek Güldoğan;* ***Control/Supervision:*** *Neslihan Cansel;* ***Data Collection and/or Processing:*** *Neslihan Cansel, Nihal Altunışık;* ***Analysis and/or Interpretation:*** *Neslihan Cansel, Emek Güldoğan;* ***Literature Review:*** *Neslihan Cansel;* ***Writing the Article:*** *Neslihan Cansel, Nihal Altunışık, Emek Güldoğan;* ***Critical Review:*** *Neslihan Cansel, Nihal Altunışık;* ***References and Fundings:*** *Neslihan Cansel;* ***Materials:*** *Neslihan Cansel.*

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