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The Effect of Consultation Time on a Patient's Decision to Undergo Blepharoplasty

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Abstract: Blepharoplasty is an operation where redundant skin and musculature, and excess fat are resected and removed for functional, or aesthetic purposes, or both. Blepharoplasty is one of the most commonly performed cosmetic procedures. No previous studies have explored the factors that affect a patient's decision to undergo blepharoplasty. We explored the factors that can affect the decision to undergo blepharoplasty in patients of the oculoplastic clinic, and specifically investigated the effect of consultation time on the patient's decision to undergo blepharoplasty. This research was a retrospective cohort study undertaken in the private oculoplastic clinic Al-Ahsa, Saudi Arabia. The study was conducted on patients seeking blepharoplasty in the oculoplastic clinic of the primary investigator between December 2021 and February 2022. A convenient sampling technique was used for patient recruitment. The Chi-square test, independent t-test and ANOVA were all used to test factors associated with consultation time, and factors associated with patients' decision to undergo blepharoplasty. A total of 97 participants were included in the study; 57 (58.8%) participants decided to undergo blepharoplasty, whereas 40 (41.2%) decided not to undergo blepharoplasty. Consultation time was not significantly associated with patients' decision to undergo blepharoplasty. The presence of eyelid deformity or disease was the only factor significantly associated with the patients' decision to undergo blepharoplasty. No significant association was found between consultation time and patient' decision to undergo blepharoplasty. Further investigations are recommended to determine the factors that influence patients' decision to undergo elective aesthetic surgery.

Keywords: consultation time, blepharoplasty, oculoplastic surgery, patient decision.

諮詢時間對患者決定進行眼瞼成形術的影響

摘要：眼瞼成形術是一種手術，其中多餘的皮膚和肌肉組織，以及多餘的脂肪被切除和去除，用於功能目的,美學目的或兩者兼而有之。眼瞼成形術是最常見的美容手術之一。以前沒有研究探討影響患者決定接受眼瞼成形術的因素。探討影響眼科門診患者進行眼瞼成形術決策的因素，並具體研究會診時間對眼瞼成形術決策的影響。這項研究是在沙特阿拉伯哈萨的私人眼科診所進行的一項回顧性隊列研究。該研究是針對在 2021 年 12 月至 2022 年 2 月期間到主要研究者的眼科診所尋求眼瞼成形術的患者進行的。一種方便的抽樣技術用於招募患者。卡方檢驗、獨立吨檢驗和方差分析均用於檢驗與會診時間相關的因素，以及與患者決定接受眼瞼成形術相關的因素。共有 97 名參與者被納入研究。57 人（58.8%）的參與者決

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定接受眼瞼成形術，而 40 人（41.2%）決定不接受眼瞼成形術。諮詢時間與患者接受眼瞼成形術的決定沒有顯著相關性。眼瞼畸形/疾病的存在是與患者決定接受眼瞼成形術顯著相關的唯一因素。就診時間與患者接受眼瞼成形術的決定之間沒有發現顯著關聯。建議進一步調查以確定影響患者決定接受選擇性美容手術的因素。

关键词：諮詢時間，眼瞼成形術，眼部整形手術，患者決定。

1. Introduction

The upper and lower eyelids have both functional and aesthetic roles. In terms of function, the eyelids provide protection to the globe from injury. Moreover, the eyelids maintain the tear film, spread the tear film over the cornea, and help in regulating the physiological flow of the tear film. From the cosmetic viewpoint, both the periorbital region and the eyelids are treated as pillars of beauty and aging [1].

Blepharoplasty is a procedure where the redundant skin and musculature, as well as excess fat are resected and removed for functional purposes (fixing the affected field of vision due to hanging skin), cosmetic purposes (restore youthfulness), or both [2-3]. Blepharoplasty is one of the most commonly performed cosmetic procedures in the United States and in Korea as well [3-4]. Although the main goal of this procedure is to restore the aesthetic youthful look, it is also performed as part of eye reconstruction post-skin cancer excision [2-3].

Blepharoplasty, just like any other surgical intervention, poses some risks and can lead to complications. Moreover, often it is done as an elective procedure where people would seek the procedure and would have to pay for it. This makes undergoing blepharoplasty a difficult decision with the possibility of being influenced by many factors.

A study [5] about the factors that influence the patient decision on surgery for lumbar disc herniation revealed several factors affecting the patient's decision. These factors were patients' information, accelerated workflow (the need of time to process the given information within the accelerated work frame of hospitals), power imbalance (the inability of patient to properly express themselves due to perceiving clinicians as the party with the greater statue and knowledge, which they do not wish to offend), and personal past experiences (which include the personal experiences, as well as friends and families experience) [5].

No previous work has explored the factors that affect the patient's decision to undergo blepharoplasty in patients presenting to the oculoplastic clinic. This work aimed to generally explore the factors that can affect the decision to undergo blepharoplasty in patients presenting to the oculoplastic clinic and to specifically investigate the effect of consultation time on the decision to undergo blepharoplasty.

2. Materials and Methods

2.1. Study Design and Settings

This study was a retrospective cohort study undertaken in the private oculoplastic clinic Al-Ahsa, Saudi Arabia. The study was conducted on patients who sought medical help from the oculoplastic clinic of the primary investigator seeking blepharoplasty between December 2021 and February 2022.

2.2. Study Subjects, Inclusion, and Exclusion Criteria

The study subjects were all patients who presented to the oculoplastic clinic between December 2021 and February 2022 looking for blepharoplasty with the following inclusion and exclusion criteria.

The inclusion criteria consisted of patient aging 18 years and older who were looking for blepharoplasty, who had no history of eyelid surgery, did not have any injectables (fillers or Botox) in the past year, and no recent facial static procedures in the past year.

The exclusion criteria consisted of patients younger than 18 years old, a patient who had a history of eyelid surgery, patients with a history of injectables (fillers or Botox) in the past year, patients with facial static procedures in the past year, and patients with incomplete data.

2.3. Sampling and Data Collection

A convenient sampling technique was used for patient's recruitment, where all the patients meeting the inclusion and exclusion criteria within the study period (December 2021 and February 2022) were enrolled in the study.

A data collection sheet was established where relevant clinical information was registered. The data sheet was filled by reviewing the files of the patients. The process of data collection was conducted under the primary investigator supervision and guidance.

The data collection sheet consisted of the following requirements: participant gender, participant age, participant education, participant medical history, participant history of previous lid surgery/injection, presence of eyelid deformity/disease, type of eyelid deformity if present, the location of deformity/disease

if present, consultation time in minutes, and patient decision whether to perform the blepharoplasty or not, the type of blepharoplasty if decided to undergo blepharoplasty, site of blepharoplasty if decided to undergo blepharoplasty.

2.4. Data Management and Statistical Analysis

Data analysis was performed using the Statistical Package for the Social Sciences, SPSS 23rd version. Frequency and percentages were used to display categorical variables. Minimum, maximum, mean, and standard deviation were used to represent continuous variables. Chi-square test was used to test for the presence of association between categorical variables. Independent t-test and ANOVA were also used to test for the presence of association. ANOVA test was followed by Tukey post hoc test to determine where the exact differences between the groups. The level of significance was set at 0.05.

2.5. Confidentiality and Ethical Consideration

Data were being managed with utmost confidentiality; privacy was secured throughout the study steps. Because of the retrospective design of the research and the use of patients' data anonymously, the need for informed consent was waived by the ethical committee. Ethical approval was obtained from the ethical board of King Faisal University, collage of medicine (reference number: KFU-REC-2021-NOV-EA000101, date: 1/11/2021).

3. Results

A total of 97 participants were included in the study. Table 1 shows the socio-demographic profile of the participants: 3 participants were males (3.1%), while 94 participants were females (96.9%). As for education, 4 participants had an intermediate education or less (4.1%), 28 participants had a high school education (28.9%), 54 participants had a bachelor diploma (55.7%), while 11 participants had high education (11.3%). As for the age, the minimum age was 21, the maximum was 65, and the mean 38.33 + 9.1.

Table 1 Socio-demographic profile of the patients (n = 97)

Demographical Characteristics	n	%
Gender		
Male	3	3.10
Female	94	96.90
Education		
Intermediate school and less	4	4.10
High school	28	28.90
Bachelor / diploma	54	55.70
Higher education	11	11.30
Age		
Minimum	21	
Maximum	65	
Mean	38.33	
Standard deviation	9.1	

Figure 1 presents the medical history of the participants. 88 (90.7%) participants were medically free, 4 participants had thyroid disease (4.1%), 3 participants had diabetes (3.1%), 2 participants had hypertension (2.1%), and 2 participants had other chronic diseases (2.1%).

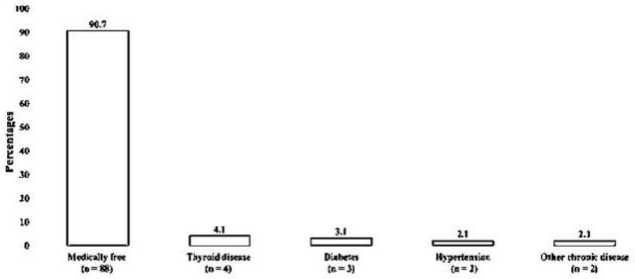

Fig. 1 Medical history of the participants

Figure 2 displays the history of previous lid surgery or injection in the participants. Thus, 29 participants reported a previous history of lid surgery or injection (29.9%), whereas 68 did not report a history of previous lid surgery or injection (70.1%).

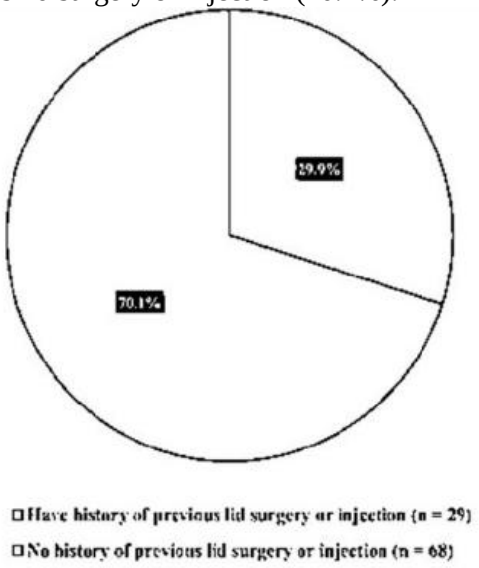

Fig. 2 History of previous lid surgery or injection

Figure 3 demonstrates the presence of lid deformity/disease in the participants. Lid deformity/disease was revealed in 91 participants (93.8%), whereas 6 patients did not have this (6.2%).

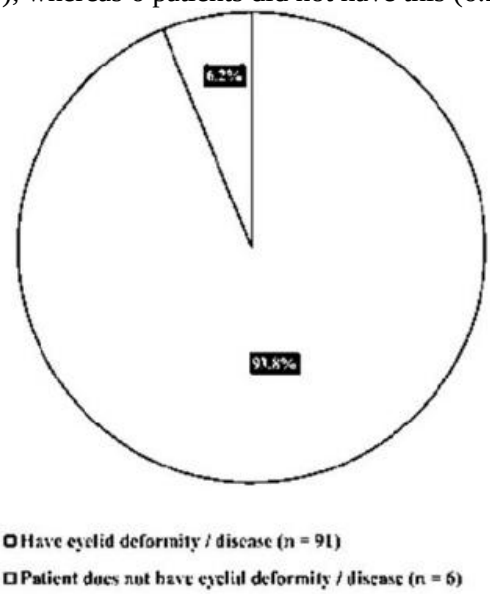

Fig. 3 Presence of lid deformity/disease

Figure 4 illustrates the type of lid deformity found in patients. Thus, 56 participants had dermatochalasis (57.7%), 43 participants had fat prolapse (44.3%), 30 participants had lid asymmetry (30.9%), 7 participants had ptosis (7.2%), 1 participant had trauma scar (1%), and 6 had no lid deformity (6.2%).

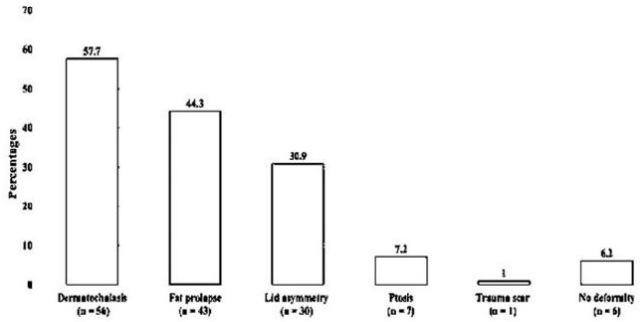

Fig. 4 Type of lid deformity found in patients

Figure 5 displays the location of lid deformity: 58 of the participants had an upper eyelid deformity (59.8%), 22 had a lower eyelid deformity (22.7%), 11 of the participants had both upper and lower eyelid deformity (11.3%), and 6 participants had no deformity (6.2%).

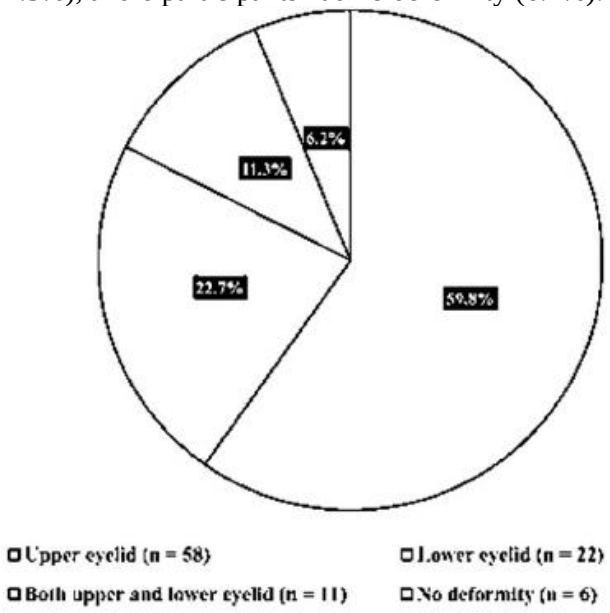

Fig. 5 Location of lid deformity

Table 2 shows the patients' decisions to undergo blepharoplasty and related histories 57 (58.8%) participants decided to undergo blepharoplasty, and 40 (41.2%) decided not to undergo blepharoplasty. As for the type of blepharoplasty in patients who decided to undergo blepharoplasty, 29 (29.9%) decided to undergo upper blepharoplasty, 19 (19.6%) decided to undergo lower blepharoplasty, and 9 (9.3%) decided to undergo both upper and lower blepharoplasty. As for the site of blepharoplasty for patients who decided to undergo the procedure, 3 (3.1%) were decided to undergo the procedure only in the right eye, while 54 (55.7%) decided to undergo the procedure in both the right and the left sides. For the consultation time, the mean consultation time was 12.39 + 4.98.

Table 2 Patients' decisions to undergo and related history (n = 97)

Question	n	%
Q1: Decision of patient		
Undergoing blepharoplasty	57	58.8
Not undergoing blepharoplasty	40	41.2
Q2: Type of blepharoplasty decided for the participants		
Upper blepharoplasty	29	29.9
Lower blepharoplasty	19	19.6
Both upper and lower blepharoplasty	9	9.3
Not undergoing blepharoplasty	40	41.2
Q3: Site of blepharoplasty for participants decided to undergo the operation		
Right side only	3	3.1
Bilateral (right and left)	54	55.7
Not undergoing procedure	40	41.2
Consultation Time		
Mean	12.39	
Standard deviation	4.98	

Table 3 presents the factors associated with consultation time. A significant association was found between education and consultation time ($p = 0.021$), where it was observed that the higher the education level, the longer the consultation time.

Table 3 Factors associated with consultation time

Factor	Consultation Time		P-Value
	Mean	Standard deviation	
Gender			
Male	13.33	6.51	0.741
Female	12.36	4.96	
Education			
Intermediate school and less	10.75	3.30	
High school	11.54	5.45	0.021*
Bachelor / diploma	12.09	4.36	
Higher education	16.64	5.50	
Medical history			
Medically free	12.41	5.06	0.915
Have at least 1 co-morbidity	12.22	4.38	
Any history of previous lid surgery or injection?			
Yes	13.00	5.60	0.435
No	12.13	4.71	
Presence of eyelid deformity / disease			
Yes	12.44	4.99	0.711
No	11.71	5.09	
Patient decision			
Undergoing blepharoplasty	12.40	3.78	0.978
Not undergoing blepharoplasty	12.38	6.36	
Age Correlation with Consultation Time			
P-value		0.60	
Correlation coefficient		0.56	

*Significant at level 0.05

Tukey post hoc test revealed that those with higher education had a significantly higher consultation time compared to those with high school education ($p < 0.05$), and those with bachelor diploma ($p < 0.05$), respectively.

It was also revealed that there was no significant association between consultation time and participants decision to undergo blepharoplasty or not. Gender, having a chronic disease, having a history of previous lid surgery/injection, presence of eyelid deformity/disease, and age were also not significantly associated with consultation time.

Table 4 demonstrates the factors associated with participants' decisions to undergo blepharoplasty. The presence of eyelid deformity/disease was the only factor significantly associated with the patients' decision to undergo blepharoplasty ($p = 0.013$), where it was observed that those with lid deformity/disease had a higher rate of desire and decision to undergo blepharoplasty compared to those without deformity/disease (62.2% vs 14.3%). Gender, age, education, having a chronic disease, and consultation time were all not significantly associated with patients' decision to undergo blepharoplasty or not.

Table 4 Factors associated with patients' decisions to undergo blepharoplasty

Factor	Decision of patient		P-Value
	Undergoing blepharoplasty	Not undergoing blepharoplasty	
Gender (n, %)			
Male	2 (66.7%)	1 (33.3%)	0.778
Female	55 (58.5%)	39 (41.5%)	
Education (n, %)			
Intermediate school and less	2 (50%)	2 (50%)	
High school	12 (42.9%)	16 (57.1%)	0.208
Bachelor / diploma	36 (66.7%)	18 (33.3%)	
Higher education	7 (63.3%)	4 (36.4%)	
Medical history (n, %)			
Medically free	49 (55.7%)	39 (44.3%)	0.054
Have at least 1 co-morbidity	8 (88.9%)	1 (11.1%)	
Any history of previous lid surgery or injection? (n, %)			
Yes	14 (48.3%)	15 (51.7%)	0.171
No	43 (63.2%)	25 (36.8%)	
Presence of eyelid deformity / disease (n, %)			
Yes	56 (62.2%)	34 (37.8%)	0.013*
No	1 (14.3%)	6 (85.7%)	
Age (mean standard deviation)	38.44 9.4	38.18 8.78	0.889

*Significant at level 0.05

4. Discussion

The decision to undergo an elective could be aesthetic surgery overwhelming, and many factors may play a role in the decision-making process. The nature of the surgery, the operated part of the body, the risks that the surgery harbors, the expected benefit of the surgery, the presence of a disease/disorder in the body part, the age of the patient, gender of the patient, personal experience with other aesthetic procedures, and knowing a person who has undergone the procedure are factors we believe can influence the patients' decision to undergo elective aesthetic surgery. To our knowledge, the literature is scarce concerning the factors that affect the factors that influence the patients' decision to undergo blepharoplasty. This study explored the factors that affect the patients' decision to undergo blepharoplasty, and particularly the effect of consultation time on blepharoplasty.

The study revealed that 58.8% patients who sought medical help from the clinic agreed and proceeded to undergo blepharoplasty, whereas 41.2% of patients did not undergo blepharoplasty. When testing the factors that are associated with patients' decision to undergo blepharoplasty, the only factor that was observed to be significantly associated was the presence of eyelid disease/deformity, where patients with disease/deformity had a higher rate of undergoing blepharoplasty compared to those without a disease/deformity (62.2% vs 14.3%). This observation is expected as patients with eyelid disease/deformity are naturally more motivated as their desire to undergo the procedure is not to seek further beauty but to fix a present problem. Surprisingly, age was not significantly associated with patients' decision to undergo blepharoplasty even though it was expected that the mean age of patients who are willing to undergo blepharoplasty would be younger than those who are not willing to undergo the procedure. This could be because, in the first place, most patients visiting the oculoplastic clinic were actually from the young age group. Although only a small minority of the patients included in the study were males (3.1%), which makes the accuracy of the comparison between males and females questionable, it was observed that there was no difference between males and female sin the decision to undergo blepharoplasty. Inc contrast to the speculation, having a history of previous lid surgery or injection was not associated with patients' decision to undergo blepharoplasty, although it was observed that patients with a history of previous lid surgery or injection had a lower rate of undergoing blepharoplasty compared to those who did not. This can be attributed to unpleasant previous experience, whether due to unsatisfactory outcomes, side effects, or even possibly due to being satisfied with the results of the previous interventions.

As for the factors associated with consultation time, education time was the only factor significantly associated with consultation time. It was observed that the higher the education level, the longer the consultation time. This can be due to the patients with higher levels of education being more inquisitive and caring about knowing the details about the issue they came to the clinic for. In contrast to what was expected, consultation time was not significantly associated with patients' decision to undergo blepharoplasty. It was presumed that patients who spend more time in the clinic would be more likely to undergo the procedure, as their longer presence in the clinic reflects higher interest and embody a more solid wish to undergo the operation, however this was not the case as consultation time was not associated with the decision to undergo the blepharoplasty or not.

This is inconsistent with [6], demonstrating that making the patients feel that they possess enough time was found to be an essential priority. However, similar to the findings of this study, time was not found in [7] to be important in patients' decision-making about multiple sclerosis treatment. Consultation time was also unassociated with age, gender, medical history, history of previous lid surgery or injection, or presence of eyelid deformity/disease. This demonstrates that consultation time is generally consistent and was observed to vary only across different levels of education.

The results of this study illustrate that the decision of patients to present to the oculoplastic clinic to undergo blepharoplasty or not was not affected by socio-demographic factors, medical history, previous eyelid procedure and consultation time. The only factor related to the decision was having an eyelid disease/deformity. This shows that the factors that constitute the decision to undergo blepharoplasty for patients presenting to the oculoplastic clinic were beyond of this study scope and that to build a clear view toward what determine the patients' decisions further studies are needed. The results of this study could not be compared or linked to other works as the literature lacks content related to this topic.

5. Conclusion

Consultation time was not significantly associated with patients' decision to undergo blepharoplasty. Moreover, gender, age, and education were all not significantly associated with the patients' decision to undergo blepharoplasty. Only the presence of eyelid deformity/disease was significantly associated with a higher rate of undergoing blepharoplasty.

This study had some limitations, such as the fact that it was a pilot study with a humble sample size. A study with a higher sample that enrolls participants from all over the country's regions and from a higher number of oculoplastic clinics would construct a better view and yield more accurate results on the topic. Another limitation of the study has not directly explored why the patients made their decision and what factors might have affected them. Another limitation of the study is that collecting the data from a single clinic, more precise and generalizable results would have been generated if multiple clinics were included. Interviewing the patients after making their decision would have allowed us to determine what encourages the patents and what discourages them to undergo blepharoplasty. The study strength resides in shedding the light on a subject not previously explored. This study opens the door to further investigating what factors affect patients' decision to undergo elective aesthetic surgeries whether ophthalmology is related or not.

6. Recommendations

We recommend conducting studies that explore the factors that affect the patients' decision to undergo elective aesthetic surgeries weather ophthalmology related or not. We recommend these studies to include a high sample size, to include samples from all over the countries, to include samples from multiple clinics and specialties (specialties with elective aesthetic surgeries).

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