



# The Importance of Multiple, Different Rhinoplasty Consultations in Patient Selection

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## Abstract

**Objective** We aimed to investigate the relationship between the number of visits to different physicians and postoperative satisfaction in patients undergoing primary septorhinoplasty by using the ROE survey.

**Methods** Patients for whom we performed septorhinoplasty in the last 3 years were examined. Patients who visited 3 different physicians (including us) before the surgery were allocated to group 1. Patients who visited  $\geq 4$  physicians comprised group 2. We randomized 50 patients in each group. Rhinoplasty outcome evaluation (ROE) was performed twice for the preoperative evaluation and to determine the satisfaction in postoperative 6th month.

**Results** Preoperative and postoperative ROE values were significantly lower in group 2 ( $p < 0.001$ ). ROE values after surgery were 82% in group 1 and 68.92% in group 2.

**Conclusion** We think that it is more appropriate for patients who visit many surgeons to be evaluated more carefully and to be psychologically examined.

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**Keyword** Rhinoplasty · Rhinoplasty outcome evaluation · Visit · Selecting patients

## Introduction

One of the most preferred surgeries is septorhinoplasty, which can be performed with both functional and esthetic expectations [1]. Patient and surgeon satisfaction in esthetic surgery is very important. There have been many publications on this subject in recent years. The most important way to enhance satisfaction after surgery is through good patient selection before the procedure. This is, of course, important for all esthetic procedures. The surgeon's experience will be trustworthy in determining who is a good candidate for rhinoplasty.

Numerous studies have suggested that impaired psychology reduces satisfaction in patients [2]. Many psychopathologic conditions including body dysmorphic syndrome, personality disorder, depression anxiety, and weak self-esteem negatively affect surgeons and patients by reducing satisfaction [3].

Rhinoplasty outcome evaluation (ROE) has high sensitivity and specificity. It is an easy-to-apply, esthetic, and functional evaluation of patient satisfaction after rhinoplasty [4]. Although there are many scales that evaluate satisfaction after rhinoplasty, ROE and its various versions have proved their reliability in many countries and have become one of the most frequently used scales.

We aimed to obtain practical information that could guide surgeons when one considers that the patient's psychology is important in terms of satisfaction; sometimes, interviews cannot provide sufficient information about the patient in terms of both duration and quality. The relationship of this dissatisfaction with the number of visits to

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different physicians has not been studied preoperatively. Therefore, we investigated the relationship between the number of visits to different physicians and postoperative satisfaction in patients undergoing primary septorhinoplasty by using the ROE survey.

## Materials and Methods

Our study was designed as a retrospective study. The Ethics Committee of Adana City Training and Research Hospital granted permission to conduct this study (374/2019). The files of patients for whom we performed closed technique septorhinoplasty in the last 3 years were examined. Patients were excluded from the study if they were aged younger than 18 years, diagnosed as having psychiatric illness, were revision cases, had concha pathology, had congenital facial deformities, and were not able to complete the questionnaire. The remaining patients were contacted by telephone to determine how many different surgeons they had visited in the preoperative period. Patients who visited 3 different physicians (including us) before the surgery were allocated to group 1. Patients who visited  $\geq 4$  physicians comprised group 2. The reason we made this classification was we found that the median number of different surgeons whom patients visited was 3.5. We did not evaluate the number of visits to the same surgeon. We tried to include a similar number of men and women in both groups, randomizing 50 patients into each group who agreed to come to the outpatient clinic, who did not move out of the city, and who remembered the number of physician visits. The patients' ages ranged from 18 to 56 years. Informed and written consent was given by each participant. All patients underwent primary closed septorhinoplasty by the same surgeon. Routinely measured preoperative ROE scores were gathered by scanning the medical data. Postoperative 6th month ROE scores were also recorded in the medical records. Patients who had undergone surgery 6 months previously and had no ROE were invited to the outpatient clinic to complete the questionnaire. Edema was satisfactorily regressed, maybe because of the closed technique. Additionally, we did not add ROE data because of the insufficient number of patients at the 12th month.

The number of physicians the patients visited was confirmed through repeat questioning. The pre- and postoperative questionnaires of both groups were evaluated, and statistical analyses were performed.

ROE was performed twice for the preoperative evaluation and to determine the satisfaction in the postoperative 6th month. The ROE was first described by Alsarraf et al. [4]. The Turkish version has been proven to be reliable [5] (Fig. 1). This disease-specific questionnaire consists of a

total of six questions. The questions include statements about functional and esthetic appearance, self-confidence, and social status. The answer to each question is scored 0–4: 0 = minimum satisfaction and 4 = maximum satisfaction. Each score is collected for the total score. A score of 24 shows maximum and is considered as 100% satisfaction.

## Statistical Analysis

Data analyzes was performed using the SPSS 21 package program. The normality of continuous variables was tested using the Shapiro–Wilk test. Student's *t* test was used to compare the mean of two independent groups, and the paired *t* test was used to compare the mean of two dependent groups. The general linear model repeated measures test was used to determine whether time-varying changes were different between the groups ( $\leq 3$  visits,  $\geq 4$  visits). The Chi-square test was used in the analysis of categorical data, and a comparison of two proportions was used in the analysis of recovery rates. Pearson's correlation coefficient was used to determine the relationship between the number of visits and ROE scores. The level of statistical significance was taken as 0.05 for all analyzes.

## Results

There was no significant difference in the mean age between the groups ( $p = 0.961$ ). Sex distribution according to groups was homogeneous ( $p = 0.689$ ) (Table 1).

Postoperative ROE values were significantly lower in group 2. ROE after surgery was 82% in group 1 and 68.92% in group 2 (Table 2) (Fig. 2).

Preoperative ROE values were significantly lower in group 2. ROE before surgery was 24.08% in group 1 and 18.67% in group 2 (Table 2) (Fig. 2).

There was a statistically significant improvement in both groups in terms of pre- and postoperative ROE means ( $p < 0.001$ ) (Table 2). There was a statistically significant difference in pre- and postoperative ROE recovery rates in both groups ( $p < 0.001$ ) (Table 2). Recovery was more pronounced in group 1 (Table 2).

## Discussion

Patients who plan to undergo rhinoplasty may visit a few surgeons before deciding which surgeon will perform the surgery, and they may have difficulty deciding between the surgeons. This can cause an increase in the number of surgeons they visit preoperatively, and this uncertainty may even cause them to change their mind about surgery. In our

**Turkish version of the Rhinoplasty Outcomes Evaluation questionnaire(ROE-T)**

1. How well do you like the appearance of your nose ?

Not at all    Somewhat    Moderately    Vev much    Completely  
 (0)            (1)            (2)            (3)            (4)

2.How well are you able to breathe through your nose?

Not at all    Somewhat    Moderately    Vev much    Completely  
 (0)            (1)            (2)            (3)            (4)

3.How much do you feel your friends and loved ones like your nose?

Not at all    Somewhat    Moderately    Vev much    Completely  
 (0)            (1)            (2)            (3)            (4)

4.Do you think your current nasal appearance limits your social or professional activities?

Always            Usually            Sometimes            Rarely            Never  
 (0)            (1)            (2)            (3)            (4)

5.How confident are you that your nasal appearance is the best that it can be?

Not at all    Somewhat    Moderately    Vev much    Completely  
 (0)            (1)            (2)            (3)            (4)

6.Would you like to surgically alter the appearance or function of your nose?

Completely    Very much    Moderately    Somewhat    Not at all  
 (0)            (1)            (2)            (3)            (4)

**Fig. 1** Rhinoplasty Outcomes Evaluation Questionnaire—Turkish Version (ROE-T)

**Table 1** Distribution of age and sex

	Groups		<i>p</i>
	Group 1 ( ≤ 3 visits)	Group 2 ( ≥ 4 visits)	
Age (Mean ± SD) (Min–Max)	26.84 ± 8.26    18.00–56.00	26.92 ± 8.15    18.00–54.00	0.961
Sex, <i>n</i> (%)			
Female	24 (48.0%)	26 (52.0%)	0.689*
Male	26 (52.0%)	24 (48.0%)	

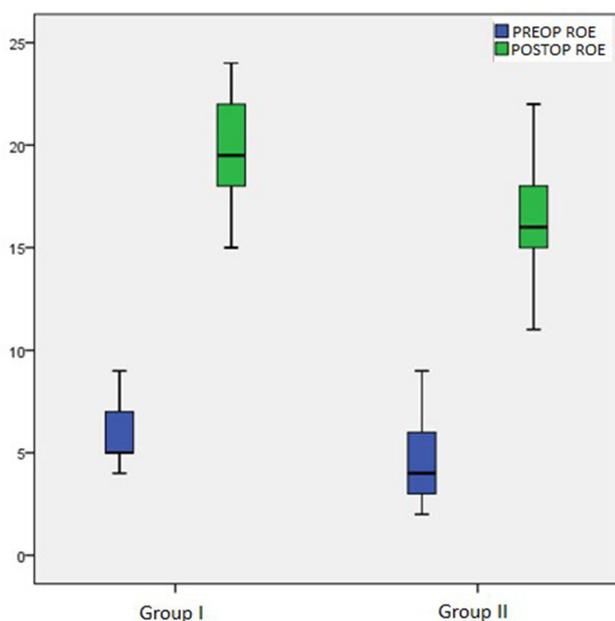
*p* Student’s *t* test,

\*Chi-square test

**Table 2** The analysis of pre- and postoperative ROE values between groups

	Groups				$p_{\text{group}}$	$p_{\text{general}}$
	Group 1 ( $\leq 3$ visits)		Group 2 ( $\geq 4$ visits)			
	Mean $\pm$ SD (Min–Max)	%	Mean $\pm$ SD (Min–Max)	%		
Pre-op ROE	5.78 $\pm$ 1.23 (4.00–9.00)	24.08	4.48 $\pm$ 1.64 (2.00–9.00)	18.67	< 0.001	0.001
Post-op ROE	19.74 $\pm$ 2.64 (15.00–24.00)	82.25	16.54 $\pm$ 2.18 (11.00–22.00)	68.92	< 0.001	
	$p_{\text{pair}} < 0.001$	$p_{\%} < 0.001$	$p_{\text{pair}} < 0.001$	$p_{\%} < 0.001$		

$p_{\text{general}}$  general linear model (repeated measurements),  $p_{\text{group}}$  Student's  $t$  test,  $p_{\text{pair}}$  paired  $t$  test,  $p_{\%}$  comparison of two proportions

**Fig. 2** Preoperative and postoperative ROE values in groups

study, we investigated whether there was a relation between the number of surgeons whom patients visited preoperatively and their postoperative satisfaction. We found a lower satisfaction rate in patients who visited  $\geq 4$  surgeons than in patients who visited  $\leq 3$  surgeons. Although there was a significant increase between preoperative and postoperative ROE values among patients who visited  $\geq 4$  surgeons, there was a significant difference in terms of postoperative ROE values between the two groups (recovery in group 1 was more pronounced). This shows that the number of surgeons visited before surgery can help surgeons in the selection of patients.

It is known that the patient's psychology is very important in rhinoplasty. Many studies have shown that rhinoplasty has positive consequences on the patient's psychosocial status. However, it should be noted that this situation is present in socially and mentally healthy individuals [6]. In a study performed in 2007, Amodeo stated

that the surgeon should be competent in the field of psychology as well as surgery and that the interviews between patients and physicians were inadequate [7]. Our aim was to provide practical and important information that could assist surgeons in preoperative discussions.

In general, esthetic surgeons try to avoid patients with psychological diseases such as body dysmorphic syndrome (BDS), depressive state, and psychotic personality disorder. One study reported that 80% of plastic surgeons did not perform surgery on patients with BDS. In the same study, it was reported that surgeons had performed surgery on such patients at least once without noticing [8].

In our study, we did not classify patients according to a psychological classification, but the data revealed by Picavet in 2011 revealed that rhinoplasty was a much preferred cosmetic operation by patients with BDS [9]. A study reported that the incidence of BDS was higher (20.7%) in patients undergoing rhinoplasty than in the normal population [10]. Surgical satisfaction in patients with BDS is very low and unpredictable [11]. In 2016, Joseph et al. stressed that these patients should be recognized as early as possible before rhinoplasty [12]. All these show the importance of patient selection for surgeons regarding rhinoplasty, but how successful are surgeons in making this choice? Anderson et al. stated that the most important factor that determined success or failure in this process was patient selection [13]. It was reported that there was very little education in the training of surgeons about "preoperative psychological evaluation, patient selection, and who will be a good postoperative patient" [14]. Tardy reported that surgeons should consider that it is very dangerous to perform surgery on depressive, obsessive compulsive, and uncooperative patients who have unrealistic demands [15]. Correa et al. stated that the evaluation and selection of patients who wanted facial plastic surgery was very important and that patients should not be evaluated only in terms of anatomic and functional aspects, but the motivation and emotional stability of patients were also important [16]. We believe that this choice is important for both surgeons and patients because recognizing and

eliminating patients who will be unsatisfied after surgery is beneficial for these patients. Knorr reported nine women who were depersonalized after rhinoplasty in 1972 [17]. These analyses show the importance of patient selection with many components to evaluate; inappropriate patient selection can lead to unhappiness in both patients and physicians.

There are many scales that evaluate postoperative results and satisfaction in rhinoplasty. As detailed previously, many relevant and psychometrically validated quality-of-life (QoL) instruments are already in use, ranging from disease-specific to general scales, e.g., the Nasal Obstruction Septoplasty Effectiveness Scale, Rhinoplasty Outcomes Evaluation, Glasgow Benefit Inventory, and Derriford Appearance Scales 59 and 24 [18]. Another scale, Face-Q, which can be used in any type of facial cosmetic surgery, is composed of ten items and can be more difficult to apply [19]. In our study, we chose to measure dissatisfaction using the ROE questionnaire because it is more rhinoplasty specific. We did not choose any of the available BDD instruments because our aim was not to give people a psychiatric diagnosis.

The Turkish version of the ROE questionnaire was used to evaluate the satisfaction of the patients. Çelik and Altıntaş tested the reliability of the Turkish version of ROE in 2018 in the evaluation of rhinoplasty results and reported that it was a reliable instrument [5]. Although ROE is used for esthetic evaluation in the literature, one question out of the six questions is for functional purposes, asking about nasal congestion. Our patients underwent surgery for both esthetic and functional purposes. ROE can be evaluated in the 3rd or 6th month or at the 1st year [20, 21]. We prefer to evaluate patients in the 6th month and to evaluate revisions at the 1st year, and to reoperate if necessary. Although not as much as at the 1st year, a large part of the edema in the 6th month had improved and basic impressions about the noses of patients had been formed. In addition, despite including surgeries from the last 3 years, we also had a higher rate of access to patients at the 6th month.

## Conclusions

Both our study and many studies in the literature clearly show that patient selection is as important as the ability and experience of the surgeon, that surgeons may not have enough time and training for patient selection, and that patient selection is important for both surgeons' and patients' postoperative satisfaction in all esthetic operations, especially in rhinoplasty. We think we have obtained practical knowledge that will help to guide surgeons. It is a very simple, but not the only determinant way to predict

patients that might be problematic after surgery. But it is appropriate for patients who visit many surgeons to be evaluated more carefully and psychologically examined. Similar studies should be performed in facial plastic surgery procedures other than rhinoplasty to clarify this issue.

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## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in this study involving human participants were conducted in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments comparable ethical standards. The study was approved by the institutional ethics committee. This article does not contain any studies with animals performed by any of the authors.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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