



Review Article

## Quality of life after cosmetic rhinoplasty in Iran: A systematic review

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### Abstract

**Introduction:** Nasal cosmetic rhinoplasty has been one of the most popular and commonly used facial cosmetic surgeries in the world and in Iran during the last two decades. This study was conducted to systematically review all the studies done on the quality of life after the rhinoplasty.

**Materials and Methods:** The comprehensive search was conducted in PubMed, Web of Science and Scopus databases, and all the studies that were conducted by Iranian authors from the beginning of the year 2000 to the end of 2017 on the quality of life after the rhinoplasty were extracted. Only prospective studies and studies performed in Iranian patients and have evaluated quality of life before and after rhinoplasty were included. Double publications and unrelated items were removed.

**Results:** Finally, there were three eligible articles, in which 275 patients seeking rhinoplasty were surveyed in total. Quality of life six months after rhinoplasty significantly increased, but no significant change was observed three months after rhinoplasty.

**Conclusion:** As a result, it seems that quality of life in Iran is improved 6 months after rhinoplasty, and this change in quality of life is not significant before 6 months.

**Keywords:** Beauty, Quality of life, Rhinoplasty, Systematic review

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### Introduction

Appearance is one of the characteristics that is always judged and leads to the relative superiority of individuals who possess this property. The most important part of the beauty is the beauty of the face that plays an important and influential role in social life (1,2).

For this reason, surgical and non-surgical cosmetic surgery has been promoted by everyone, especially women, because the desire for beauty in women is more than men, and this issue in women is more likely to lead to stress and psychological problems (1).

The position of the nose in the center of the face is important and slight changes in the shape, size, and position of the nose affect the face and beauty (3,4). The same effect has led to rhinoplasty as one of the

most popular and commonly used plastic surgeries (3,5).

In 2017, cosmetic nasal surgery has been ranked third among the most common plastic surgeries in the world (6). In Iran, this type of cosmetic surgery has been very well received (especially among women) and is ranked seventh in Iran (7).

Aesthetic nasal surgery improves the self-confidence and improves the social life of individuals by increasing the beauty of the face (4). It is expected that with the improvement of these conditions, the quality of life of individuals after the operation of beauty will increase.

The World Health Organization defines the quality of life as an individual's perception of his position in life within the context of the cultural and value conditions in which he lives and the aspirations, standards, expectations and attitudes associated with it (8).

After rhinoplasty, satisfaction with the appearance of the nose and its function plays an important role in the quality of life of individuals. The purpose of this

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study is to systematically review the quality of life after the operation of rhinoplasty beauty in Iran

### Materials and Methods

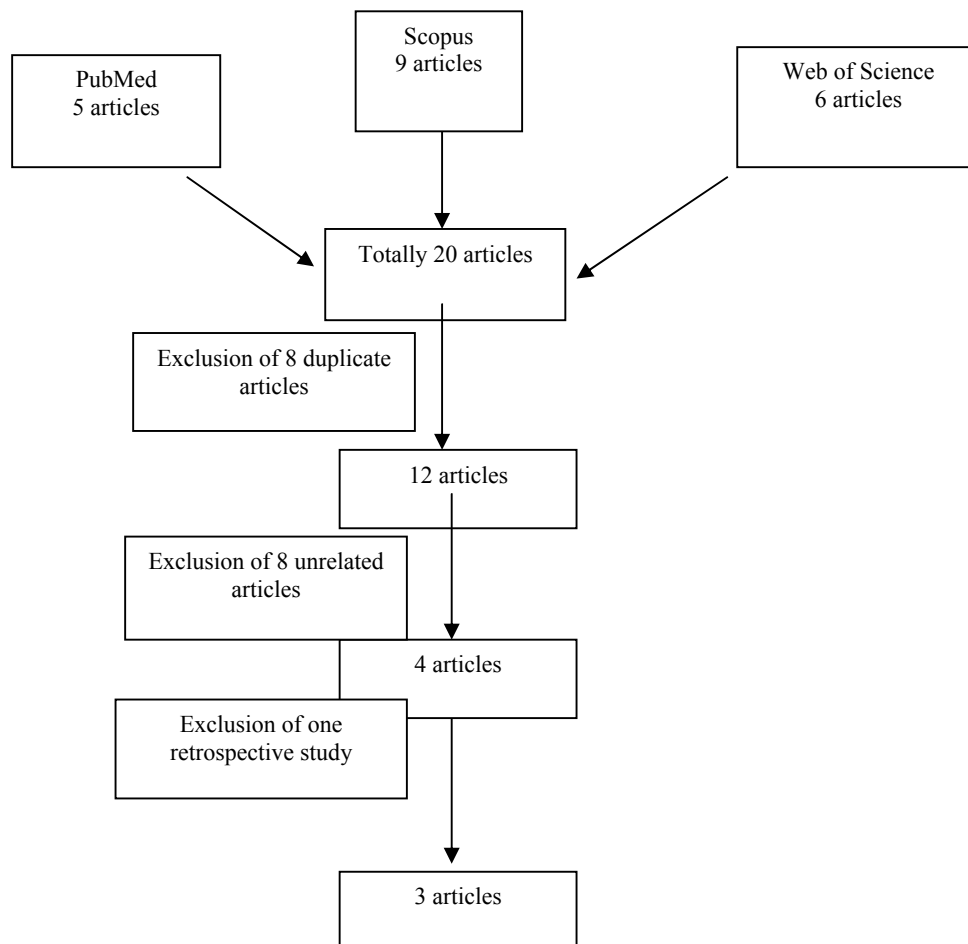
For this systematic review, a complete and comprehensive search was carried out in ISI, PubMed and Scopus databases, and was used as the standard PRISMA1 guidelines. For this search, each of these resources was based on the relevant instructions. Search using the keywords Rhinoplasty and Quality of Life in the title of the article, and Iran in the address and opilization and combining them with the AND operator.

All observational, case-control, and prospective studies and published studies between 2000 and 2017 were included in the study by Iranian authors who examined the quality of life before and after rhinoplasty.

Also, only studies published in English and Persian were included in the study and studies that were conducted by Iranian authors in non-Iranian population were excluded. In addition to review articles, letters were sent to the editor, a brief report and news articles were excluded. All articles were reviewed by two independent individuals.

With this search strategy, 20 papers were found collectively in three databases that left 12 papers after removing duplicates. The remaining articles were then screened in terms of title and abstract, and articles and titles that were not related to the subject matter were excluded, and, finally, 3 articles remained for analysis, the full text being reviewed. The flowchart of study is shown in Figure 1.

A descriptive analysis was used to describe the data.



**Figure 1.** Study flowchart

### Results

In this study, based on entry and exit criteria, three studies from Iranian authors about the status of life quality before and after rhinoplasty were analyzed.

In total, 275 people participated in this study, 79 of them (28.72%) were male and 196 (71.27%) were female.

From the three studies, two cases were performed using the SF-36 questionnaire and a study using WHO-QOL-BREF. The number of participants in a study was more than 100, and two studies were fewer than 100. In two quality of life studies, six months after the operation, quality of life was investigated in two studies, three months later

In two studies that assessed the quality of life six months after rhinoplasty using the SF-36 tool, there

was an increase in quality of life, but in two of the studies that examined three dimensions of quality of life, no change in quality of life was observed, although the tools were different. The characteristics of the studies studied in this study are shown in Table 1. The status of quality of life before and after the operation in these studies is listed in Table 2.

**Table 1.** Characteristics of three studies included in this systematic review

	Author	Year	Journal	Sample Size	Age (year) Mean±SD	Study Method	Study tool	Duration of follow-up	Results
1	Hosseinzadeh et al.	2017	J Clin Diag Res	150	26.8±5.4	Prospective	Short form SF-36	3 and 6 months	Increase in all aspects of QOL after 6 months
2	Zojaji et al.	2014	Facial Plas Surg	50	26.4±7.3	Prospective	WHOQOL Brief	3 months	No significant changes except for psychological health
3	Fatemi et al.	2012	Aesthetic Plast Surg	75	26.05±7.78	Prospective	SF-36	6 months	Increased quality of life

**Table 2.** Quality of life before and after rhinoplasty in three evaluated study

		Quality of life score Mean±SD	
		Before rhinoplasty	After rhinoplasty
1	Hosseinzadeh et al. (15)	67.26±26.01	After 3 months 68±15.70 After 6 months 83.65±9.6
2	Zojaji et al. (17)	69.9±12.6	71.6±11.3
3	Fatemi et al. (14)	117.25±12.56	118.75±12.97

## Discussion

In this systematic review, it is indicated that quality of life in individuals had a significant improvement in six months after the operation of rhinoplasty. Quality of life is affected by a variety of factors, including the acceptance of friends and family, social status, self-esteem, and satisfaction with appearances and faces. Several studies have already been done on the quality of life after rhinoplasty in the world, which in most cases have shown a higher quality of life after rhinoplasty (9-13). But in Iran, limited studies have been done on the quality of life of individuals before and after rhinoplasty (14-17) and there has never been a systematic review of the quality of life after rhinoplasty in Iranian people. The present study is the first systematic review of quality of life after rhinoplasty in Iran.

In a study by Zojaji et al, which was conducted using WHOQOL-BREF, three months after rhinoplasty, there was no significant change in quality of life (17). Also, three months after rhinoplasty, no significant change was found in any of the subsets of physical health, environmental health and social relationships. Only significant

improvements were observed in their mental health (17).

In the study of Hosseinzadeh et al., quality of life was evaluated three and six months after rhinoplasty with SF-36 questionnaire. Three months after rhinoplasty, there was no significant change in quality of life, but six months after the operation, there was a significant change in quality of life (15).

In the study by Fatemi et al., which also used the SF-36 questionnaire, six months after the operation, there was a significant change in the quality of life in Iranian people (14).

Contrary to the above-mentioned studies, in a study conducted in Iran by retrospective cohort in 2014, the quality of life after the operation of rhinoplasty decreased (16).

The reason for this decline in quality of life in this study is the unnecessary surgery, medical errors, and the unreasonable cosmetic surgery just because of its popularity. Reduced social support in the study was probably due to the adverse outcome, the appearance of the face and the reaction of family and peers (16).

This study concludes that inappropriate performance of upper airways is one of the known causes of the inappropriate influence of rhinoplasty on quality of life. In this study, although quality of life declined after rhinoplasty, it improved over time (16).

Based on studies, the longer the time for rhinoplasty is related to the better quality and credibility of the quality of life assessment (10,16). Only one study in Germany examines the long-term outcome of rhinoplasty, in which the quality of life is evaluated 3 to 13 years after rhinoplasty. The result of this study showed increase and improvement of the quality of life (9).

In another study in Germany, Bulut et al. examined the quality of life and the outcome of septorhinoplasty 12 months after operation using the SF-36, ROE, and FROI-17 questionnaires in 102 candidates for surgery. The results of this study showed an improvement in ROE and FROI-17 score. In the area of quality of life in the SF-36 questionnaire, a significant improvement was observed in only two subscales of mental health and role functioning physical. The degree of satisfaction with surgery results and the improvement of quality of life in people with nose deviation were higher (18).

Bulut et al. in another study evaluated the long-term effect of septorhinoplasty on the quality of life of individuals. They assessed the quality of life of individuals 12 and 60 months after the operation using questionnaires, ROE, FROI-17 and SF-36. In this study, the ROE and FROI-17 score increased significantly one year after the operation. Improvement in quality of life occurred in two subscales of SF-36 questionnaire including mental health and role functional physical one year after septorhinoplasty. Five years after the operation, the quality of life improved in comparison with one

year after the operation and the increase in the quality of life score in 6 subgroups of the 8 subscales of SF-36 questionnaire including physical functioning, role functioning physical, mental health, bodily pain, social functioning and vitality was significant compared to preoperative period (19).

In a systematic review and meta-analysis by Dreher et al. quality of life after all cosmetic surgeries, including rhinoplasty was evaluated and results showed improvement in quality of life after all the surgeries (20).

This improvement in quality of life can be due to various causes, including satisfaction of the operation and appearance of the face and improvement of social relationships or other causes. Another reason is that the beauty criteria in Iran are different and according to women's Hijab in the country, the face is the only exterior appearance in women, and this is why this kind of beauty act is more popular in women and after the operation improves the quality life of women.

Small number of studies in Iran was the main limitation of current study. Future systematic review using all studies in the world and comparison of results with findings from studies in Iran is suggested.

### Conclusion

As a result of this limited study, the quality of life of patients in Iran is improved significantly six months after surgery, and in lesser time than six months, improvement in quality of life is not significant.

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