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### RESEARCH ARTICLE

#### SPECTRUM OF SEPTORHINOPLASTY-AN OBSERVATIONAL PROSPECTIVE STUDY

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#### Abstract

The septoplasty makes the nose altered and improved.. The shape and contour of the nose are greatly influenced by the nasal septum, The septorhinoplasty is to improve the appearance of nose (rhinoplasty) and to improve how you breathe through nose (septoplasty). It involves operating on the bones and cartilage that give shape and structure to nose and making septum straight. The nasal septum is the cartilage and bone in nose. The septum divides the nasal cavity into a right and left side. The evaluation and effectiveness of spectrum of septorhinoplasty on quality of life has been analysed through qualitative questionnaires with the patient who underwent surgery. The subject group comprised with majority of males (15 males) and 10 females. The age ranged between 8 and 50 years among those who presented to the rhinoplasty. The average increase in patient satisfaction after surgery was 44.8+13, from a mean preoperative score of 38.9 + 11 to a postoperative score of 82.75+17.2. This study demonstrates that, despite being a complicated treatment, rhinoplasty has a positive effect on both the appearance and functionality of the nose.

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#### Introduction:-

Rhinoplasty is one of the oldest known surgeries to the humankind. Along with the evolution of improved techniques and better surgical modalities, this surgery has been growing in panorama.

This surgery has varied indications ranging from functional obstructions in the nasal cavity to pure cosmetic reasons and these include asymmetry of the alar cartilages or upper lateral cartilages, nasal tip with lack of support, rotation or projection, over projected nose, nasal tip asymmetry or deformities, crooked nose, saddle nose, cleft lip nose or other congenital anomalies, septal perforations and revision rhinoplasty.

#### Objective of the study:-

1. To determine patient satisfaction regarding aesthetic appearance and function before and after septorhinoplasty using a validated questionnaire.
2. To determine the relation with patient characteristics and surgery details.

#### Methodology:-

The current study was an observational prospective study which was undertaken at a tertiary care center over a period of two months from October 2021 to March 2022. We included 25 patients who underwent a pre-operative consultation and answered the ROE questionnaire. In addition, the questionnaires asked patient demographic data

such as age, sex, psychological aspects, reason for visit. All patients had undergone detailed facial analysis including objective measurement of facial angles, target oriented realistic psychological assessment and counselling prior to pre anaesthetic check up and surgical planning. Type of deformity, etiology, surgical procedures performed, grafts and splints used were analysed and studied.

Among the surgical procedures; in closed rhinoplasty, ipsilateral or bilateral inter cartilaginous incisions were made and in open rhinoplasty, inverted sea-gull wing incision was used. Flap was elevated over nasal dorsum in supra perichondrial and sub periosteal plane. Humps were reduced with rasps and for saddle deformity, septal bone or cartilage were used. Osteotomies had been done in cases of crooked or deviated noses. Tip corrections as required were done. After achieving hemostasis, merocel nasal packs were used followed by nasal splints.

Anterior nasal packs were removed after 48–72 h and splints were removed after 7 days after surgery. Antibiotics, analgesics and decongestant were given for 7 days. Post-operative satisfaction was evaluated at 3 and 6 months after surgery using Rhinoplasty Outcomes Evaluation (ROE) questionnaire.

The validated ROE questionnaire is composed of six questions (5 about nose shape and 1 about nasal breathing). Each question is scored by the patient on a scale from 0 to 4, where 0 is the most negative answer and 4 the most positive one. The sum of the scores was divided by 24 and multiplied by 100 to obtain a result ranged from 0 to 100. A lower score indicates more dissatisfaction. A positive difference between post-operative and pre-operative scores means improvement after intervention.

**Fig 1.1:-** Before and after septorhinoplasty.



**Fig 1.2:-** Intraoperative pictures of septorhinoplasty.**Fig 1.3:-** Rhinoplasty outcome Evaluation.

Rhinoplasty outcomes evaluation (ROE)

This questionnaire is designed to assist your surgeon in determining the best patient outcomes following rhinoplasty surgery. Your comments are confidential and may be used to refine surgical procedures for future patients. Please circle the number that best characterizes your current opinion regarding the following questions:

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

Not at all	Soemwhat	Moderately	Very much	Completely
0	1	2	3	4
2. How well are you able to breathe through your nose?  

Not at all	Soemwhat	Moderately	Very much	Completely
0	1	2	3	4
3. How much do you feel your friends and loved ones like your nose?  

Not at all	Soemwhat	Moderately	Very much	Completely
0	1	2	3	4
4. Do you think your current nasal appearance limits you 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	Soemwhat	Moderately	Very much	Completely
0	1	2	3	4
6. Would you like to surgically alter the appearance or function of your nose?  

Definitely	Most likely	Possibly	Probably not	No
0	1	2	3	4

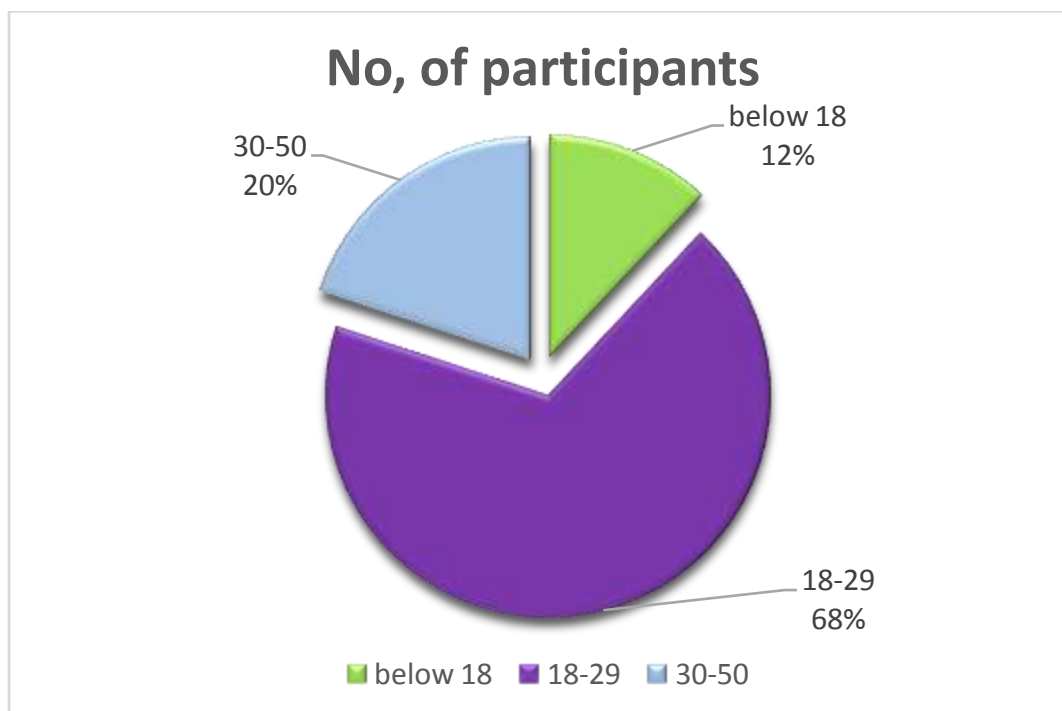
**Results:-**

A total of 25 cases were operated in this study.

There were 15 males and 10 females among the patients with a male-to-female ratio of 0.6 to 0.4. The age ranged between 8 and 50 years among those who presented to the rhinoplasty.

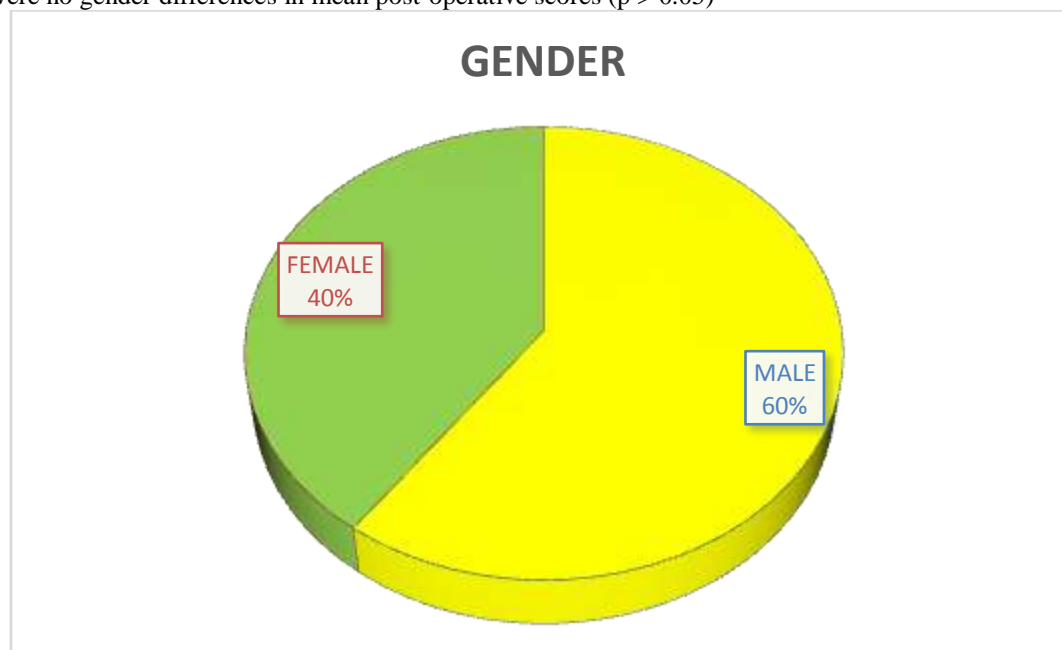
### Graphical Representation

#### Age



#### Sex Distribution

There were no gender differences in mean post-operative scores ( $p > 0.05$ )



#### Number Of Deformities Observed In Rhinoplasty Patients:

DEFORMITY	NO. OF CASES
CROOKED/DNS WITH MULTIPLE DEFORMITIES	13

HUMP NOSE DEFORMITY	7
SADDLE NOSE	4
CONGENITAL DEFORMITIES	1

The Procedures Performed Were

- |                     |    |
|---------------------|----|
| 1. Alar Baten graft | 15 |
| 2. Spreader graft   | 5  |
| 3. Osteotomy        | 10 |
| 4. Hump reduction   | 7  |
| 5. Augmentation     | 4  |

At 3 months,

The average increase in patient satisfaction after surgery was 44.5+13, from a mean preoperative score of 38.9+11 to a postoperative score of 82.25 +17.1

At 6 months,

The average increase in patient satisfaction after surgery was 44.8+13, from a mean preoperative score of 38.9 + 11 to a postoperative score of 82.75+17.2

Statistical analysis of ROE scores showed significant improvement from pre-operative to post-operative period ( $p < 0.05$ ).

However, there was no difference between 3 and 6 months' post-operative scores.

### Analysis

Analysis of the ROE questionnaire revealed an excellent satisfaction at final follow-up .

A statistically significant improvement between the overall preoperative and postoperative scores were observed .

This procedure has low patient satisfaction compared with other cosmetic surgeries. Patient satisfaction is the principal outcome measure of success in facial cosmetic surgeries.

Patient's satisfaction may be influenced by social environment, education, life experience and level of expectations, which may or may not be realistic.

This questionnaire quantifies the result from the surgical procedure, assessing respiratory function, quality of life and cosmetic results.

Surgeon goal is to improve both cosmetic and breathing, and not purely the aesthetic component

This study focused on a patient population from a public hospital, where rhinoplasty is performed in association with other nasal procedures and doctors who do pre-operative consultations are experienced in those fields

Prospective studies are really important since they permit to choose good candidates for surgery and to assess objectively surgery results.

### Conclusion:-

Rhinoplasty is an aesthetic procedure involving finer surgical details and requires good surgical skills and planning

We conclude the ROE questionnaire is a useful tool for evaluating outcomes of rhinoplasty surgery.

Our patient's satisfaction at 3 and 6 months improved significantly after rhinoplasty

This study shows that Rhinoplasty, despite being a complex procedure has proven benefits in terms of aesthetic and functional outcomes.

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