

Type be used as a  
parameter to estimate



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number: 9841056964 Total number of words: ABSTRACT AIM: To check if nasal index is a parameter for estimating gender difference MATERIALS AND METHODS: South Indian people of various age groups were chosen and the nasal index of males and females were calculated.

The width of the nose and the nasal height was calculated using a vernier caliper. The nasal index of both males and females was then done to conclude if nasal index can be used as a parameter to estimate gender difference.. A cross sectional study of the nasal parameters were thus taken to estimate and thereby compare the nasal index. RESULTS: using the nasal parameters such as nasal width, nasal length and the nasal indices, the comparison between the nasal indices of the males and the females of South India was done and recorded. for females , the mean nasal index was 84. 71.

And for males, the mean nasal index was 91. 61. The p value is 0. 002909 and the t-value is 2. 83591.

The result is significant at  $p < 0. 05$ . this shows that nasal index can be used a reliable parameter in estimating the gender difference CONCLUSION: The study concludes with the nasal index of the South Indian males slightly

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higher than that of the females which proves that nasal index is a useful parameter to estimate gender difference. KEY WORDS: Nasal index, parameter, gender difference.

INTRODUCTION: Nose, is one of the most important structure in the face that has both bones and cartilages and performs major functions. Hence, the study of nasal index and its comparison forms the basis of racial and ethnic difference in nasal index among different population. It forms the base of the facial anthropometric study, genetic counselling and forensic investigation as well. Nasal analysis is the most important procedure that a clinical surgeon will take up before taking up the rhinoplasty surgery (for the correction of size and shape of nose). Hence, the nasal parameters such as nasal index, nasal height and nasal width) are the commonly accepted factors accepted in the field of anthropology. The most important aspect of nasal index in anthropological studies is that it is based on both bony and cartilaginous landmarks. It is also unique and significant when compared to other parameters. The findings such as finding the gender difference using the nasal index has its own importance in the field of forensic science, clinical uses, and anthropological studies as well.

The shape and size of the nose might vary from individual to individual depending on the environmental circumstances, race from which they belong and even due to their habitats adaptive changes might occur in different individuals . thus we can say that nasal size and shape is influenced by adaptation to the environment. Nasal index is a regional and racial sensitive anthropometric index. It is also one of the an anthropometric parameter for classifying the race and sex of an individual in the world. Nasal

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index is calculated by the formula : nasal width/ nasal height multiplied by 100. These kind of novel studies about the nasal parameters will help for the purpose of clinical practice (plastic surgery), forensic medicine as well as for the anthropological study.

Nasal index proves as a useful tool for neurosurgeon, plastic surgeon, and anthropologists. Facial anthropometry is an important tool utilized and forms a part of genetic counselling, reconstructive surgery and forensic examination . The nose varies in its shape and size and gets modified during childhood, adolescence and at the later stages of life.

the variation when observed microscopically, is found to have modifications in the soft tissues, elasticity of the skin, cartilage size changes, and resilience effects. Hence our aim is to compare the nasal index of both males and females and hence find out if it can be a parameter for estimating the gender difference among the South Indian population. **MATERIALS AND METHODS:** South Indian people of various age groups were chosen and the nasal index of males and females were calculated. The width of the nose and the nasal height was calculated using a vernier caliper. The nasal index of both males and females was then done to conclude if nasal index can be used as a parameter to estimate gender difference. The calculated data was then tabulated and the p-value And t-value was found and the result was recorded. **RESULTS AND DISCUSSION :** From the study, it is found that the nasal index is a reliable parameter for the estimation of gender difference . Anthropometric parameters of the nose vary with age, sex, ethnic background and their habitats.

Knowledge of these is essential for surgeons who take up aesthetic repair.

Articles from other authors state that even after the skeletal formation of nose during birth, the nose continues to develop and minor or major changes in its size and shape might occur.

PARAMETERS MALES FEMALES Range Mean Range Mean

1. Nasal height 2. 5-3. 24. 12.

5-3. 14. 052. Nasal width 2.

1-3. 03. 61.

9-2. 73. 253. Nasal index 74. 19-115. 38132.

4870-104122 From the above data, we can understand that the mean values of nasal height in males is slightly greater than the nasal height in females.

In the same way, we can also claim that the nasal width is greater in males than in females. Hence, after the calculations, the average value of nasal indices of males is greater than the females. Through this data we are able to compare the nasal indices of males and females and conclude that gender difference can be found out through the calculation of nasal index and hence nasal index is a useful parameter for estimating the gender difference. Based on the basal region of the nose, 3 types of nose are present 1.

leptorrhine type (long and narrow)- nasal index below 70 2. Mesorrhine type (medium)- nasal index from 70-85 3. platyrrhine type (broad and flat)- nasal index above 85

Based on these, the nasal indices can be further compared. TYPE OF NOSE MALES FEMALES Leptorrhine type 01 Mesorrhine type 13 20 Platyrrhine type 27 19

leptorrhine type ; that is, the long and narrow type of nose is mostly absent among the South Indian population.

No male from the participants of the research had the leptorrhine type of nose and only one female was found to have this type of the nose. One more important result that we get is the mesorrhine type of nose is the most common in South Indian females and platyrrhine type of nose is the most common type in males. But, a significant amount of female population is also found to have platyrrhine type of nose and in the same way, quite a large number of males have also found to have mesorrhine type of nose. From the study conducted above, we can say that most of the South Indians have nose of medium length and broad and flat types most commonly. Further, for females the mean nasal index was 84. 71And for males, the mean nasal index was 91. 61The p value is 0. 002909 and the t-value is 2. 83591. The result is significant at  $p < 0. 05$ . this shows that nasal index can be used a reliable parameter in estimating the gender difference. Various studies by authors have proved the racial as well as gender differences in nasal index among different populations.(16-18