

## CORRELATION BETWEEN THE LENGTH AND BREADTH OF THE NOSE AND THE FACE IN DIFFERENT RACES

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**ABSTRACT:** This study is aimed at determining whether there exists a correlation between the relative dimensions of the nose and the face. Through this study, we hoped to give a normal range for the different races in Malaysia. We randomly chose 100 Malay, 50 Chinese and 50 Indian subjects. We chose equal numbers of male and female subjects, mainly in their 20's and 30's. There is a correlation between the length of the nose and the face among Malays, with 78% of the subjects measured having a nose:face ratio of less than 0.27. There is also a correlation between the breadth of the nose and the face among Malays, with 67% of the subjects having a ratio of less than 0.28. Similar correlations were found with Chinese and Indian subjects. The length and breadth of the nose in relation to the face is greater in males than in females. Further research is required before conclusive evidence is found for the existence or non existence of a correlation between the length and breadth of the nose and face in the different races in Malaysia. (JUMMEC 2002; 2:147-149)

**KEYWORDS:** Correlation, length, breadth, nose, race, different races.

### Introduction

The nose is a very prominent feature on the face. Therefore, this study is aimed at determining whether there exists a correlation between the relative dimensions of the nose and the face. Through this study, we hoped to give a normal range for the different races in Malaysia.

Knowing the relative dimensions of the face is highly important in fields like reconstructive surgery where one needs to reconstruct features on the face to look as normal as possible. In plastic surgery, the ratio between the length and breadth of the nose and face has to be carefully taken into account to ensure that the end results are satisfactory.

It is also important to know the normal relative dimensions to detect swelling or edema of the nose or face. Besides, we may also learn whether there are any aesthetic differences in the relative dimensions of the nose and face among different races in the country. In essence, the objective of this study is to discover whether there is a correlation between the length and breadth of the nose and that of the face in different races in Malaysia.

### Methodology

#### 1. Equipment

We decided to use simple and straightforward measuring equipment, such as rulers, mainly in order to reduce costs and to avoid lengthy and complicated measurements. By doing so, we also hoped that people would be less reluctant to participate in our study.

#### 2. Definitions of Length and Breadth of Nose and Face

Length of the nose the distance from the root of the nose (upper part of the nasal bone, connecting directly to the forehead) to the apex, or free angle of the nose. (1)

Length of the face the distance from the hairline to the tip of the chin.

Breadth of the nose the distance between the outer

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lateral surfaces of the right and left alar of the nose.

Breadth of the face the distance between the right and left external ears, measured at the level of the eyes.

### **3. Method of Selection**

We randomly chose 100 Malay, 50 Chinese and 50 Indian subjects. We chose equal numbers of male and female subjects, mainly in their 20's and 30's. We avoided choosing bald subjects, because of the absence of a hair-line, and individuals below the age of 18 years. We also restricted our study to people with normal noses and faces, without craniofacial abnormalities.

### **4. Method Used for Taking Measurements**

For the length and breadth of the nose, we used a 6-inch ruler. For the length and breadth of the face, we used equipment as shown in Diagram 1.

## **Results**

The results of the study can be divided as following ;

**Correlation Between The Length Of The Nose And The Face Among Different Races.**

24 % of Malays had a nose:face length ratio below 0.25. 54% had a ratio between 0.25-0.27, 19% had a ratio of 0.28-0.30, and 3% had a ratio of more than 0.30.

16% of Chinese subjects had a nose:face ratio of less than 0.25. 50% had a ratio between 0.25 and 0.27, and the remaining 34% had a ratio in the range of 0.28-0.30.

42% of Indian subjects had a nose:face ratio of 0.25-0.27. 40% had a ratio between 0.28 and 0.30, and the remaining 18% had a ratio exceeding 0.30. Overall, the length of the nose is about 1/4 to 1/3 of the length of the face. Among the races, Indians have the longest nose in relation to the face.

### **Correlation Between the Breadth Of The Nose And The Face Among Different Races.**

28 % of Malays had a nose:face breadth ratio below 0.26. 39% had a ratio between 0.26-0.28, 21% had a ratio of 0.29-0.31, 10% had a ratio of 0.32-0.34, and 2% had a ratio exceeding 0.34.

30% of Chinese subjects had a nose:face ratio of 0.26-0.28. The remaining 70% had a ratio in the range of 0.29-0.31.

2% of Indian subjects had a nose:face ratio of less than 0.26. 10% had a ratio between 0.26 and 0.28, 46% had a ratio of 0.29-0.31, 34% had a ratio in the range of 0.32-0.34, and the remaining 8% had a ratio exceeding 0.34. Among the three races, our results indicate that

Indians have the broadest nose in relation to the face.

### **Correlation Between The Length Of The Nose And The Face By Gender**

11% of the males had a ratio of less than 0.25. 52% had a ratio between 0.25 and 0.27, and 29% had a ratio of 0.28-0.30. Only 8% of them had a ratio of more than 0.30.

21% of the females had a ratio of less than 0.25. 48% had a ratio between 0.25 and 0.27, and 27% had a ratio of 0.28-0.30. Only 4% of them had a ratio of more than 0.30.

### **Correlation Between The Breadth Of The Nose And The Face By Gender**

4% of the males had a ratio of less than 0.26. 30% had a ratio between 0.26 and 0.28, and 38% had a ratio of 0.29-0.31. 22% had a ratio in the range of 0.32-0.34. Only 6% of them had a ratio of more than 0.34.

25% of the females had a ratio of less than 0.26. 29% had a ratio between 0.26 and 0.28, and 41% had a ratio of 0.29-0.31. The remaining 5% of them had a ratio of 0.32- 0.34.

## **Discussion**

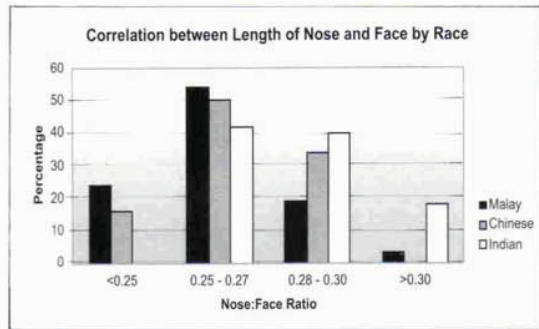
There is a correlation between the length of the nose and the face among Malays, Chinese and Indians. 78% of the Malay subjects measured had a nose:face ratio of less than 0.27, 84% of the Chinese subjects measured had a nose:face ratio of 0.25:0.30 and 82% of the Indian subjects measured had a nose:face ratio of 0.25:0.30. Based on the results, the length of the nose in relation to the face is greater in males than in females. In males, 81% of the subjects measured had a nose:face ratio of 0.25:0.30, but in females, 75% of the subjects measured had a nose:face ratio of 0.25:0.30.

There is also a correlation between the breadth of the nose and the face among Malays, Chinese and Indians. 67% of the Malay subjects had a ratio of less than 0.28. 70% of the Chinese subjects had a ratio of 0.29:0.31. 80% of the Indian subjects had a ratio between 0.29 and 0.34. The breadth of the nose in relation to the face is greater in males than in females. From the data collected, about 60% of the male subjects measured had a nose:face ratio of 0.29:0.34, but in females only 46% of the subjects measured had a nose:face ratio of 0.29:0.34.

In conclusion, our study is not final, as we only took 200 subjects, and our results may not represent the population of Malaysia as a whole. Our subjects were mainly in their early twenties, and our findings are not truly representative of other age groups. Also, due to

the lack of available funds, the measuring instruments we used for this study were very simple, and some accuracy may have been sacrificed in our study.

Thus, further research is required before conclusive evidence is found for the existence or non existence of a correlation between the length and breadth of the nose and face in the different races in Malaysia. We hope that our study could serve as a basis for further research in this field.



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