

RESEARCH ARTICLE

Anthropometric measurements of the external nose among Malay and Chinese: A Cross-sectional study from Sarawak, Malaysia

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ABSTRACT:

Nasal anthropometry is among the best clues to racial origin and sexual determination. The nose's shape and structure differ between genders, races, and ethnicities. The understanding of nasal anthropometry is applied in forensic medicine, nasal reconstruction surgery, and naso-facial dysmorphology identification. This research aimed to investigate the anthropometry of the external noses among Malay and Chinese university students in Sarawak. A total of 80 university students (40 males and 40 females) aged between 18 and 25 participated. The nasal height, length, width, and philtrum length were measured anthropometrically using a slide calliper. Malay males had significantly more nasal width than females ($p < 0.05$). Nasal width, philtrum length, and nasal index were significantly higher in males than female Chinese students ($p < 0.05$). The philtrum length was significantly longer in Chinese students than in Malays ($p < 0.05$). Further study can be done by using a larger sample size to obtain a better representation of the particular ethnicities. In conclusion, sexual dimorphism and ethnic differences can be observed in the anthropometry of the external noses among Malay and Chinese in Sarawak.

KEYWORDS: Anthropometric measurements, External nose, Type of nose, Malay, Chinese, Sarawak.

INTRODUCTION:

Humans are born to vary from each other, either genetically or physically, by their unique characteristics. Morphology is believed to be the main and vital way to identify human variation, apart from other methods at microscopic levels, such as genetic and biochemical.¹ Anthropometry is the longest-used tool for measuring human physical variation and surface morphology. Anthropometry originates from the Greek words "anthropos," which means human, and "metron" which means measure.²

According to the World Health Organisation (WHO), anthropometry is a cost-effective and noninvasive method used to evaluate the human body's size, proportions, and composition. It measures the whole human body, including individual parts such as the face, nose, eyes, and limbs. Nasal anthropometry concerns the measurement of different parameters of the human nose. The nose is categorised based on different nasal parameters such as nasal height, nasal width, nasal length, philtrum length, and nasal index.³ The nasal index is the percentage of the nasal width divided by the nasal height.⁴ Nasal anthropometry is known as one of the best clues to racial origin.⁵ The shape and structure of the nose alter between different genders, races, and ethnicities.⁶ Therefore, the knowledge of different parameters of the nose and nasal index is important in physical anthropology and forensic medicine as it can