

## **Morphometric assessment of cranio-facial complex of a group of Sinhalese in Sri Lanka**

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Morphometric studies have revealed cranio-facial differences among different populations, age groups and between the male and female. Therefore, the aim of this study was to establish normative values for twenty four cranial and facial measurements in a Sri Lankan Sinhalese population and to ascertain the differences between genders.

A cross sectional analytical study was carried out using 220 individuals of 20-25 years of age using a multistage stratified cluster sampling method. The sample consisted of 81 males and 139 females. Twenty four craniofacial measurements were taken and recorded in millimeters using standard anthropometric instruments. They were cranial (cranium circumference, head breadth, head width and forehead heights of the cranium, skull height, and calvar height), facial (upper face heights, middle face heights, lower facial height, and facial width), nasal (nasal lengths, nasal root, nasal width, tip protrusion, alar length, and columella length), and soft tissue measurements (eye fissure width, lower lip thickness, total lip thickness, ear length on right and left, mouth width, and the interocular distance). Statistical analysis was done using SPSS software.

According to the results the measured variables excluding skull height, calvar height, mouth width and interocular distance were significantly higher in males than in females ( $p < 0.05$ ).

The present study could be used in forensic anthropology establishing ancestral relationships, and reconstructive cranio-facial surgeries among adult Sinhalese population in Sri Lanka. Since the present study is based on a small sample further studies are recommended to increase the statistical power.

*Financial assistance given by the University Research Grants (RG/AF 2013/21/D) is acknowledged.*