

Evaluation of Cephalic Index and Facial Index in a Sri Lankan Population

B.M.P. Bandaranayake*, S.M. Hettiarachchi, D.D. Ihalagedara,
R.G.A.P. Abeysundara, M. Dissanayake, B.G.T.L. Nandasena,
B.M.H.S.K. Bannaheka, A.K.S. Arambawatta

*Department of Basic Sciences, Faculty of Dental Sciences, University of
Peradeniya, Peradeniya, Sri Lanka
pabasarabandaranayake11@gmail.com*

Standardized data regarding Cephalic Index (CI) and Facial Index (FI) measurements within a specific population is essential for determining racial and gender differences in both anthropological and clinical settings. The objective of this research was to evaluate the CI and FI among a representative sample of a Sri Lankan population, as there has been a lack of assessment regarding CI and FI in this population. This study examines CI and FI values in a cohort of 623 healthy young individuals representing various ethnicities and different provinces in Sri Lanka, comprising 250 males and 373 females aged 18-30 years. The ethnicity was confirmed by three generation pedigree and the province was selected according to the period of residence in the district. Standard anthropometric measurements were employed to determine CI and FI. Highly significant associations were found between CI and sex ($P=0$), ethnic group ($P=0.0047$) and the province ($P=0$). Mean CI of the population is calculated as 82.41 ± 4.24 . Mean CI of males and females were calculated as 81.68 ± 4.25 and 82.90 ± 4.18 respectively. The highest mean CI was found in Muslim females (86.17 ± 3.15). Meanwhile, the highest mean CI (84.28 ± 4.23) was found in Sabaragamuwa province. Factors such as sex ($P=0$) and province ($P=0$) were significantly associated with FI. However, there was not any significant association between the ethnicity and the FI ($P=0$). Mean FI of the population was calculated as 89.44 ± 8.65 . Mean FI of males and females were calculated as 91.79 ± 8.83 and 87.87 ± 8.16 respectively. The highest mean FI was found in Muslim males (95.20 ± 3.96). Meanwhile the highest mean FI (92.66 ± 9.84) was found in Central province. This study provides foundational data for defining CI and FI measurements to a representative sample of a Sri Lankan population, offering valuable insights for anthropological research, and facilitating in clinical setting and treatment planning for adults in Sri Lanka.

Keywords: Cephalic Index, Facial Index, Sri Lanka