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ROLE OF HAND AND FOOT PRINT DIMENSIONS IN STATURE IDENTIFICATION AMONG INDIAN POPULATION

Nandita K P¹, Srikant N² and Shweta Yellapurkar³

Manipal Academy of Higher Education, India

Introduction: The four essential factors in Forensic Anthropology, representing in determining personal identification are age, sex, stature and ethnicity. Among this 'big fours' of the biological profile, determination of stature is considered as one of the main parameter of personal identification in forensic examinations. Thus, this study will aim to correlate relation between hand and foot measurements with stature of individual.

Aim of the study: The study aimed to estimate the relationship between statures of an individual on the basis of, hand and foot prints, in Indian populations.

Materials & Methods: The study group comprised of 500 subjects (age group above 18 years) with normal growth and development.

Measurement of height: The measurements of height were made using standard anthropometer by making the subject stand erect on the horizontal plane. The distance of the subject from the ground to the highest point of the vertex in the median sagittal plane was recorded. Various parameters like Hand length and Hand breadth, Foot length and breadth, Heel Ball Index were measured and compared with the height of the individual using the standard technique.

Results: Correlation of the various hand and foot parameters showed a regression coefficient range of 0.3-0.708. Among all variables measured, Foot length exhibited the highest correlation with stature (r value of 0.706 and 0.708, p-value< 0.001). Further forward stepwise linear regression analysis (height=80.295+3.390 * foot length) established foot length to be the single best predictor of height (r value of 0.708 and standard error of 4.23cms).

Conclusion: Thus, the foot length provides highest reliability and accuracy in estimating stature of unknown males and females. Also this study will help to generate population-specific equations using a simple linear regression statistical method.

Biography

Nandita K P has completed BDS and MDS in Oral Pathology & Microbiology in Manipal College of Dental Sciences, Mangalore and is presently working as Associate professor in Department of Oral Pathology & Microbiology, Manipal College of Dental Sciences, Mangalore, (Manipal Academy of Higher Education, Manipal, Karnataka, India). She has published 16 papers in reputed journals and is also the faculty member for Certificate course for Forensic Odontology and won Research awards like TMA PAI GOLD medal and GUIDENT award.

nandax2001@yahoo.com