



AIII-04

Estimation of personal height from the length of Ulna bone

I. Ilayperuma, B. G. Nanayakkara, K. N. Palahepitiya

Dept. of Anatomy, Faculty of Medicine, University of Ruhuna, Sri Lanka

Many factors like, racial, gender, ethnic and nutritional factors play an important role in determining the height of an individual. Estimation of stature from measurements of various long bones has been achieved with varying degree of accuracy. Those studies resulted in establishing formulae for the estimation of height from long bones for the respective populations. However, literature shows that there is a great void in such norms for Sri Lankans. This study was carried out to investigate the relationship between personal height and ulna length among a group of male and female Sri Lankan adults and to derive a regression formula between the ulna length and height of an individual. A total of 258 adults with an age span of 20-23 years were included in the study. The ulna length was measured using a sliding caliper capable of measuring to the nearest 0.01 mm. The height of the individual was measured standing erect, in anatomical position using a standing height measuring instrument. The differences of the ulna length between the genders were found to be highly significant. A positive correlation between height and ulna length was observed in both sexes and it was statistically significant. Regression equations for height estimation were formulated using the ulna lengths for both sexes. The results indicate that ulna length provides an accurate and reliable means in estimating the height of an unknown individual. The regression formulae derived in this study will be useful for anatomists, archaeologists, anthropologists and forensic scientists.