ESTIMATION OF STATURE OF AN INDIVIDUAL USING ULNAR LENGTH AMONG CHENNAI POPULATION

ABSTRACT

CONTEXT

Estimation of stature has a significant importance in the field of forensic medicine and anthropometry. Anthropometry is a series of systematized measuring techniques that express quantitatively the dimensions of human body and skeleton. The ultimate aim of using anthropometry is to help the law enforcement agencies in achieving ''personal identity'' in case of unknown human remains .

AIM OF THE STUDY

The aim of the study was to find out the relationship between personal stature and length of ulna and to derive linear regression equation to calculate height from length of ulna and vice-versa.

OBJECTIVES:

1. To find out correlation between ulnar length with stature of an individual.

2. To derive linear regression formula to estimate stature from these dimensions obtained.

To evolve linear regression equation for male and female separately

STUDY SETTING:

The present study was carried out in Government Kilpauk Medical College &Hospital (GKMC) Chennai.

STUDY DESIGN:

This study was a cross sectional one with both descriptive and analytical components. . The descriptive component to find out mean heights ulnar lengths of both hands of male and female study participants. The analytical component was used to evaluate the correlation between the height and length of ulna bone and to arrive at a regression equation for height with length of ulna in both sexes

STUDY POPULATION:

The study subjects are all medical and paramedical students of various batches in Government Kilpauk Medical College and Hospital of age group between 18 to 22 years who belonged to Chennai population (Born & Brought up in Chennai).

ELIGIBILITY CRITERIA:

Inclusion criteria was male or female healthy medical and paramedical students of age 18-22 years fromKMC,Chennai who were born and

brought up in Chennai, subjects with skeletal abnormalities like achondroplasia, polio, scoliosis, previous fractured forearm, amputated upper limb and students from other than those not born and brought up in Chennai were excluded out from the study.

RESULTS:

The observations were analyzed separately for both right and left ulna in each sex on all subjects and results are tabulated. The mean ages of the study subjects (male 21.184 ± 3.27 and female 21.01 ± 3.31) were not significantly different between genders. Significant ($P < 0.05$) Gender differences in mean height and length of ulna was found in the study. Mean right and left ulna lengths of the male (26.614 ± 2.92 and 26.492 ± 2.85) were significantly larger than that of the females (24.944 ± 2.64 and 24.780 ± 2.58) of all ages. Significantly larger than that of the females of all ages.

KEYWORDS : Stature, Length of Ulna, Identification, Linear regression formula.