Abstract

Introduction

The estimation of stature is crucial in identifying the individual especially when the body has been destroyed, decomposed or certain parts of unknown victims remain either in mass disasters and natural calamities. The estimation of height depends on the fact that limbs exhibit consistent ratios relative to the total height of a person and these ratios are linked to age, sex, and race. The hand and finger dimensions vary in different races and ethnic groups and are used to determine the stature of an individual.

Objectives

The purpose of the present study was to estimate the stature from the hand and finger dimensions in three major ethnic groups in Malaysia.

Materials and Methods

This study was conducted in AIMST university and UiTM university, Kedah, Malaysia in the year 2018 where hand and finger dimension were measured to estimate the stature among 300 students which comprised three races (Malays, Chinese and Indians). The number of males and females was equal in each race (n=50). All the subjects were aged between 18-30 years. Descriptive statistics, Pearson's correlation coefficient, and linear regression were employed for the statistical analysis of the data.

Results

The correlation coefficients between hand and finger dimensions with stature in all races were statistically significant ($p < 0.05$) and showed higher correlation with specific anthropometric parameters. The regression equation for stature estimation was formulated using the hand and finger dimensions for three races of Malaysia.

Conclusion

The hand and finger dimensions can be successfully used to predict stature among the three races of the Malaysian population.

Keywords

Stature, hand length, hand breadth, finger length, Malaysian population.