HAND PARAMETERS AND THEIR CORRELATION WITH THE HEIGHT IN ADULT POPULATION OF ASWAN GOVERNMENT

قياسات اليد وترابطها مع طول الجسم في البالغين من محافظة أسوان

محمد الجدي محمد، هبة كمالمحمد، هالة زين العابدين محمد، أسما، السيد حسن عبد الحليم

Abstract:

OBJECTIVE: The hand measurements were carried out on both hands and all fingers of each volunteer to perform a standard for the Aswan population and to correlate the hand length with the body height. MATERIAL AND METHODS: Hand print impressions of 1000 adult Aswanian volunteers (500 males and 500 females) were taken. They are right handed. All volunteers were from Aswan governate by both parents. Their ages were from 18-20 years old. They have good health and free of any chronic debilitating disease. The parameters studied were maximum length and breadth of both hands and for each finger of both hands. Hand Index (maximum hand width / hand length X 100) and finger Index (maximum finger width / finger length X 100) for each finger were estimated. For estimation of body height a Height Measuring Stand was used. The all measurements were done at fixed time from 9 am to 11 am to avoid the diurnal variation the data were analyzed statistically. RESULTS: The hand parameters in the male were found to be statistically significant longer and broader than the female. A symmetrical male and female hands were found. A significant correlation between the body height and all hand parameters were found, the greater correlation was found with the hand length. A generalized multiple regression equation has been designed to estimate stature from values of hand length and hand breadth in Aswanians regardless of sex or laterality in the form: S (stature) = 55.3 + 5.5 HL + 1.9 HB ± 5.1. This equation may be helpful to obtain approximate stature when there is difficulty in obtaining a direct measurement of the body height. CONCLUSION: Variations in hand measurements and body height may be attributed to several factors like genetic, racial, geographical, climatic and nutritional.

Keywords:

hand parameters, adult, Aswan Governorate, body height, hand length, hand breadth, finger length, finger breadth

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