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A Correlational Analysis of Sexual Dimorphism, 2d:4d, Age, and Weight among the Ikwo Population in Nigeria

Obaje Godwin Sunday*, Nwachukwu Sylvia Chinwendu and Egwu Augustine Ogugua

Department of Anatomy, Faculty of Basic Medical Sciences, College of Medicine, Federal University Ndufu Alike Ikwo, Ebonyi State, Nigeria

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ABSTRACT Digit ratio (2d:4d) study is generating research concerns in medical sciences. Finger length determination is a known predictor to health status, behaviours and obesity. Aim of this study was to determine the dimorphism, 2d:4d, and weight differences of Ikwo population. Sample population was four hundred and one (n=401) with 181 males and 220 females within the age of 12-18 years of urban secondary school in Ebonyi State, Nigeria. Measurement was done with digital vernier caliper to measure digit lengths from the crease of the palm to the tip, where 2d was divided by 4d to give 2d:4d ratio. Also, the stadiometer was used to measure height and weight, and all measurements were in millimeters (mm) except body weight was in kilogram (kg). Mean height was higher in males (161.64 ± 11.07) than females (159.14 ± 6.34) while weight of females was higher (48.18 ± 9.84) than males (49.71 ± 7.02) but not significant (P<0.07). Right finger (2d:4d) of males was lower than females (0.95 ± 0.04 and 0.96 ± 0.04) and not significant (P<0.090) while the left finger (2d:4d) was higher in males (0.96 ± 0.04) than females (0.95 ± 0.04) and significant (P<0.047). Height negatively correlated with both left and right of 2d:4d (r = -0.09, p<0.05, r=0.07, p<0.05). Also, the association between right and left 2d:4d were r=0.07, P<0.07 and r= -0.09, p<0.05. In conclusion, digit ratio (2d:4d) evaluated weight and age for population, dependent and independent variables were predictive models to establish that height and sexual dimorphic features existed in digit lengths.