Relation between cranial capacity and brain weight with body weight and height in 18-26 years old Iranian students

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Abstract

**Background and Objective:** The size of the human body is studied in anthropometry. In one field of anthropometry, the relation of skull and brain size with body weight and height in human are studied. This study was done to determine the relation between cranial capacity and brain weight with body weight and height in 18-26 years old Iranian students.

**Methods:** This cross-sectional study was done on 286 students (150 females and 136 males) in Arak, Iran. Cranial capacity, brain weight, body weight and height, cerebral index and the ratio of brain to body (cerebral quotient) in 18-26 years old students were measured.

**Results:** The mean of cranial capacity in males and females were 1393.71 and 1168.71 mm\(^3\), respectively (P<0.05). The mean of brain weight in males and females were 1445.19 and 1209.61 gram, respectively (P<0.05). The mean of cerebral index in males and females were 1.99 and 2.2, respectively (P<0.05). Positive statistical correlation was seen between cranial capacity with body weight, height and BMI in both gender.

**Conclusion:** Cranial capacity and brain weight in males was more than females while cerebral index was more in females.

**Keywords:** Anthropometry, Cranial capacity, Brain weight, Cerebral index, Gender, Iran

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