

عنوان مقاله:

The Relationship between Brain Volume, Brain Weight and IQ in Children in Primary Schools in the South of Iran

محل انتشار:

مجله دانشگاه علوم پزشکی کرمان، دوره 27، شماره 2 (سال: 1399)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

Background: Anthropometry is a branch of anatomy. One of the important parts of anthropometry is cephalometry, which is characterized by anatomical dimensions of the head area. The aim of this study was to investigate the relationship between brain volume, weight, and IQ in children. **Methods:** This descriptive-analytical study was performed on 300 students. Conventional measuring instruments were used for anthropometric measurements. Body weight and skull dimensions were measured. Then, using the appropriate formulas, the volume and weight of the brain and the brain index were measured. **Results:** The Pearson correlation coefficient confirmed a weak correlation between the amounts of IQ and anthropometric dimension in female samples. The mean head circumference of males was 2 cm above the mean head circumference of females. Compared to the central index and the dispersion, anthropometric dimensions were significant between boys and girls. According to the analysis of neural network, the anthropometric dimensions of head height, brain weight, head width, and brain index in boys and anthropometric dimensions around the head volume of head width and head height in girls were the most important in relation to IQ. **Conclusion:** The results of this study showed that there was a significant statistical difference between the central index and the distribution of anthropometric dimensions in boys and girls. Moreover, there was not a significant relationship between IQ and anthropometric dimensions of the body. In girls, there was a weak correlation between IQ and head width, head height, brain volume, and brain weight.

کلمات کلیدی:

Anthropology, Head circumference, Brain volume, Intelligence quotient

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