

## **LIFE STYLE AND ENVIRONMENTAL FACTORS INFLUENCE THE IQ IN CHILDREN AND ADOLESCENTS- A STUDY IN MALAYSIA**

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Intelligence quotient (IQ) is widely used to assess different aspects of mental ability. Development in mental ability initiates from conception and continues through adulthood. Various environmental factors affect IQ. The aim of this study was to assess the correlation between IQ and environmental characteristics on cranial capacity in children and adolescents in Malaysia. This cross-sectional study was performed on primary and secondary school students in Kuala Terengganu, Malaysia. Students, who were aged between 6 to 16 years and did not have any mental or physical disabilities, participated in this study. Measurements including weight, height, body mass index and cephalometry were performed for each subject. The Wechsler Abbreviated Scale of Intelligence-second edition (WASI-II) questionnaire was used for each subject to evaluate the subtests of IQ. A total of 419 subjects with the mean age of  $12.51 \pm 2.82$  years had participated in this study. Boys were taller ( $p=0.04$ ), had higher IQ ( $p=0.01$ ) and cranial capacity ( $p<0.001$ ) as well as block design score ( $p=0.02$ ) when compared with girls. There was a significant mean effect for age ( $p=0.03$ ), gender ( $p=0.04$ ), paternal education ( $p=0.04$ ), family income and block design ( $p=0.03$ ) on cranial capacity. This study revealed different patterns of brain growth, function and IQ amongst male and female subjects as well as defining the environmental factors that can affect cranial capacity and that the IQ and cranial capacity may be improved by tuning up the lifestyles and economic conditions of the families in developing countries.