

# 8<sup>th</sup> World Congress on TOXICOLOGY AND PHARMACOLOGY

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### The latest trends of IQ and brain size and effects of life style and environmental factors on cranial capacity

**Introduction:** 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.

**Objectives:** The aim of this study was to assess the correlation between IQ and environmental characteristics on cranial capacity in children and adolescents in Malaysia.

**Methods & Materials:** 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 for 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.

**Results:** 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.

**Conclusions:** 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. (It is an original research conducted in Malaysia)

### Biography

Swamy K B has been awarded PhD by Andhra University, his Master's Degree MS (in Clinical Anatomy) from Andhra Medical College, D M C h (Maternal & Child Health) from IGNOU, New Delhi, his Medical Degree (MBBS) in 1976, from SV University, India. He has expertise in multi medical disciplines, Human Genetics, Reproductive Health & Developmental Anatomy and in Herbal Medicine. He has been the genetic counsellor for many Medical institutions. He possess prestigious grants FRGS,URGS from Malaysia, he has conducted researches on Herbal Medicine and Diabetes, "Brain size and Intelligence Quotient (IQ)", He has been the former founder Anatomist, Professor and Head for many Medical Schools in India as well as in Malaysia. He is an International Editorial Board Member for many reputed journals like Anatomical Society of India (ASI). Recently he has been unanimously elected as an Executive Board Member for ASI and an Organizing Committee Member for the upcoming 8th World Congress on Toxicology at Dubai, UAE "9<sup>th</sup> Euro-Global Summit to be held at Paris and 11<sup>th</sup> International Congress on Toxicology and Risk Management to be held at October 9<sup>th</sup> -11<sup>th</sup>, 2017 in London, UK.

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