Brain Eectrical Activity Mapping (BEAM) on trait anxiety among Malaysian Chinese children

ABSTRACT

Objective - Woefully, the early onset of anxiety disorders had affected children in different aspects throughout their developmental stages. In order to get rid of the increased prevalence rate among children, the biological attributed risk factors for anxiety should be given more concern. Particularly, this research intended to study the biological brain mechanism for trait anxiety among children. With brain electrical activity mapping, this research was aimed to study the relationship between the brain locations situated at the prefrontal cortex and temporal lobe with trait anxiety. Subsequently, this research aimed to predict the associated brain locations for trait anxiety among anxious children. Methodology/Technique - A total of 212 Chinese children from Kuala Lumpur, Malaysia with high trait anxiety was recruited after the first phase of the screening phase through the administration of the State-Trait Anxiety Inventory for Children-Trait Scale (STAIC-T). Recruited children then proceeded to the second phase of brain electrical activity brain mapping with a Quantitative Electroencephalogram (qEEG) brain mapping machine. Finding - Results showed that brain locations Fp1, Fp2, F7, F8, F3, F4, T3, and T4 are significantly correlated with trait anxiety while F8, Fp2, F4, and Fp1 are the significant predictors for trait anxiety among children during on task state. In short, the biological brain mechanism of brain locations played a role in forming the anxious trait the personality of children which resulted in reducing their resilience towards stress.

Keyword: Brain Electrical Activity Mapping (BEAM); Children; Chinese; Malaysia; Trait anxiety; Quantitative Electroencephalogram (qEEG)