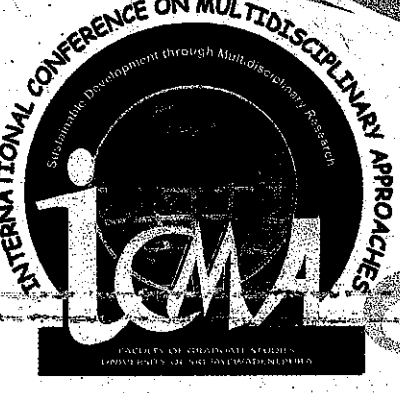
NATIONAL SCIENCE FOUNDATION

4th International Conference on Multidisciplinary Approaches - 2017

"Sustainable Development through Multidisciplinary Research"

PROCEEDINGS



JOINTLY ORGANIZED BY

FACULTY OF GRADUATE STUDIES
UNIVERSITY OF SRI JAYEWARDENEPURA

MINISTRY OF SCIENCE, TECHNOLOGY AND RESEARCH

NATIONAL SCIENCE FOUNDATION

20TH - 22ND OF SEPTEMBER, 2017

ASSOCIATION BETWEEN NEUROCOGNITIVE TEST SCORES AND SCHOOL TEST PERFORMANCE; RESULTS FROM A SRI LANKAN SETTING

Madhushanthi H.J.H.[1]*, Wimalasekera S.W.[2], Goonewardena C.S.E.[3], Amarasekara A.A.T.D.[4] and Lenora R.S.J.[2]

[1] Allied Health Science Degree Programme, Faculty of Medicine, University of Ruhuna, Sri Lanka
[2] Department of Physiology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka
[3] Department of Community Medicine, & Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka
[4] Department of Allied Health Sciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka
madhushani122@gmail.com

dolescents undergo rapid physical and cognitive growth soon after puberty. ognitive abilities are essential for learning and scholastic achievement. A ignificant number of school children in Sri Lanka have various learning disabilities specially in reading, mathematics and nonverbal learning. This study aimed to ıvestigate the association between the neurocognitive test scores and subject erformance of early female adolescents living in Galle municipal area. A school ased descriptive cross - sectional study was conducted on 218 female adolescents ged between 11 - 14 years. Cognitive functions were assessed with eight subtests f Wechsler Intelligence Tests for Children (WISC), Test of Non Verbal ıtelligence (TONI) and two computer based executive function tests; Inhibition ask and Visuo- Spatial Working Memory. Term test marks obtained for athematics, science and Sinhala language were taken from the school records to sess subject performances. Data were analyzed using SPSS statistical package. ean Verbal comprehension index (VCI), Perceptual Reasoning Index (PRI), orking Memory Index (WMI) and Estimated Full Scale Intelligence Quota FSIQ) were, 77.45 (±12.69), 69.71 (±9.27), 96 (±34.71) and 78.78 (±10.21) spectively. Mathematics test score is significantly correlated with EFSIQ (r=0.46), CI(r=0.43), WMI (r=0.38) and Non Verbal Intelligence Test scores (r=0.35). The nguage score is correlated with EFSIQ (r=0.43) and VCI (r=0.49), science test ore correlated with EFSIQ (r=0.49) and VCI (r=0.48). In conclusion verbal mprehension index, working memory index and estimated full scale IQ are rrelate best with mathematics scores. VCI and Estimated full scale IQ are rrelate best with Science and Sinhala language test scores.PRI and PSI showed ak correlations with all subject performances. However executive functions test formances were weakly correlate with mathematics and sinhala subject scores l not correlate with science score. Reforming the education system by orporating cognitive (WM) training programme at school setting would be ıeficial for students to improve academic success.

ywords: *Neurocognitive test, School test, Sri Lanka*