

Contributory Factors of Mathematical Achievement – A Study among School going Adolescents

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Abstract

Mathematics is among the core subjects in the schools that help to unlock the mysteries and enhance rational thinking. It polishes symbolic representation and abstract reasoning. Apart from the recognition and importance given to Mathematics, poor achievers facing issues are yet to be solved. The aim of the present study was to see whether sex, intelligence, metacognitive awareness, executive functioning, working memory, processing speed, and mathematical anxiety predicted mathematical achievement or not. 54 males (screened from 105) and 53 females (screened from 100) studying in the CBSE schools aged 15-16 years comprised the sample, selected according to the inclusion & exclusion criteria. Mathematics Achievement Test, Mathematics Anxiety Scale and Junior Metacognitive Awareness Inventory (Version- B), were administered on the first session. On the second session, Digit Span, Letter Number Sequencing (WMI of WISC-IV), Symbol search, Coding (PSI of WISC-IV) and Comprehensive Trail Making Test were administered. Descriptive Statistics (Mean and S.D), Inferential Statistics (t-test) Correlation Statistics (Pearson Product Moment Correlation) and Prediction Statistics (Hierarchical Multiple Regression Analysis, following the statistical criterion) were computed. Results revealed that Mathematical Anxiety predicted Mathematical Achievement beyond all other predictor variables. (From HMRA).

Keywords: executive functioning; mathematical anxiety; mathematical achievement; processing speed; working memory

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