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Age Differences in Complex Problem Solving and Affective Decision Making

Gopangana Das¹, Shamita Mahapatra²

^{1,2}Ravenshaw University, India

ABSTRACT

Understanding the age-related cognitive changes and declines are important as the effect of such changes impact the quality of life in the later part. Cognition is a multifaceted higher mental ability that involves information integration, planning and executive functions. The PASS (planning, attention, simultaneous and successive) processes provide an integrative picture of human cognitive functions. The present research examined the changes in complex problem solving and affective decision-making ability with increasing age. The sample consisted of 180 participants divided into three age groups i.e., young group (17 years – 20 years), middle-aged group (40 years – 60 years) and old age group (65 years – 83 years). Brain Based Intelligence Test (BBIT) was administered to meet the above objectives. One-way analysis of variance was employed to examine the significance of difference in cognitive performances among the three groups. In the event of a significant ANOVA result, post-hoc Tukey test was carried out for pairwise comparisons. Problem-solving that required abstract thinking and complex planning ability showed a marked deterioration in old age group, whereas, young group and middle-aged group did not show any difference in their performance. However, old age group excelled in the predicament response task that required generating solutions based on affective judgment, an ability which is facilitated by accumulated life experience and wisdom. Yet their ability to generate possible solutions within time limit was markedly deficient compared to young and middle-aged groups.

Keyword: Brain based test of intelligence (BBIT); cognitive aging; executive functions; PASS model; planning