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Family Relationships and Executive Functions in Tunisian Children

The influence of family dynamics on the development of executive functions in children is a central issue in developmental neuropsychology. This study involved 120 Tunisian children aged 7 to 12 years. Family dynamics were assessed using the 24-item Family Relationship Index (FRI), measuring cohesion, expressiveness, and conflict. Executive functions were evaluated through the Hayling Sentence Completion Test (inhibition), Trail Making Test – Part B (flexibility), Tower of London (planning), and Digit Span and Corsi Block-Tapping tasks (working memory). Among children from functional families, Spearman's correlations showed moderate, significant positive links between cohesion and both planning and flexibility. A weak, non-significant positive correlation was also found with working memory. No significant link was observed with inhibition. Expressiveness was generally weakly correlated with executive functions, apart from a moderate, significant association with flexibility. In children from dysfunctional families, conflict showed moderate, significant negative correlations with planning and inhibition. A weak, non-significant negative link was also observed with working memory. Conflict was also associated with lower academic performance. Across the total sample, school performance was significantly related to flexibility and planning, while links with inhibition and working memory were weak and non-significant. Mann–Whitney U tests revealed significant group differences, with children from functional families achieving better results in inhibition and planning tasks and having higher academic performance. A robust regression analysis identified cognitive flexibility as the only significant predictor of academic performance, independent of family dynamics. Planning and inhibition were not significant predictors. These findings underscore the importance of considering family climate in neuropsychological assessment and support the specific role of cognitive flexibility in children's academic success.

Keywords: Executive functions, Cognitive flexibility, Academic performance, Tunisian children

Biography

Sleh Eddine Saadi is a clinical psychologist and psychotherapist specializing in various therapeutic modalities, including hypnosis, psychodrama, and schema therapy. He holds a master's degree in clinical psychology from the University of Tunis and completed a Certificate of Advanced Studies in Brief Therapies at the Faculty of Medicine of Tunis. His main areas of interest include mental health, addictions, and cognitive development in children. He is currently working as a clinical psychologist and psychotherapist in the Mental Health Department at Mohamed Tahar Maamouri Hospital in Nabeul, Tunisia.