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Executive Functions and Academic Achievement in a High-Poverty Sample

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Abstract: Research exploring cognitive theories of executive function (EF) report positive associations with academic outcomes, but whether such general cognitive theories generalise to when children are exposed to social or economic poverty contexts require more in-depth investigating. This study explores associations between EF and academic achievement for an ethnic minority sample aged 8–10 years, from high poverty, urban backgrounds. EF skills were measured using stop-signal (inhibition), continuous performance (sustained attention), task-switching (cognitive flexibility), spatial span (working memory) and Tower of Hanoi (planning). In addition, we included a popular standardized test of academic ability commonly used by schools to measure literacy, numeracy and science skills and the Raven's Progressive Matrices task to measure general cognitive ability. EF is differentiated in this sample and is linked to academic achievement. The role of important mediators like cognitive ability are considered in the context of children with high-poverty urban backgrounds.