

Environmental Factors and Executive Functions of Children in 5-Year-Old Kindergarten

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Abstract : The concept of educational success, combined with the overall development of the child in kindergarten, is at the center of current interests, both in research and in the environments responsible for the education of young children. In order to promote it, researchers emphasize the importance of studying the executive functions [EF] of children in preschool education. More precisely, the EFs, which refers to working memory [WM], inhibition, mental flexibility and planning, would be the pivotal element of the child's educational success. In order to support the EFs of the child, and even his educational success, the quality of the environments is beginning to be explored more and more. The question that arises now is how to promote EFs for young children in the educational environment, in order to support their educational success? The objective of this study is to investigate the link between the quality of interactions in 5-year-old kindergarten and child's EFs. The sample consists of 118 children (70 girls, 48 boys) in 12 classes. The quality of the interactions is observed from the Classroom Assessment Scoring System [CLASS], and the EFs (i.e., working memory, inhibition, cognitive flexibility, and planning) are measured with administered tests. The hypothesis of this study was that the quality of teacher-child interactions in preschool education, as measured by the CLASS, was associated with the child's EFs. The results revealed that the quality of emotional support offered by adults in kindergarten, included in the CLASS tool, was positively and significantly related to WM and inhibition skills. The results also suggest that WM is a key skill in the development of EFs, which may be associated with the educational success of the child. However, this hypothesis remains to be clarified, as is the link with educational success. In addition, results showed that factors associated to the family (ex. parents' income) moderate the relationship between the domain 'instructional support' of the CLASS (ex. concept development) and child's WM skills. These data suggest a moderating effect related to family characteristics in the link between 'quality of classroom interactions' and 'EFs'. This project proposes, as a future avenue, to check the distinctive effect of different environments (familial and educational) on the child's EFs. More specifically, future study could examine the influence of the educational environment on EF skills, as well as whether or not there is a moderating effect of the family environment (ex. parents' income) on the link between the quality of the interactions in the classroom and the EFs of the children, as anticipated by this research.

Keywords : executive functions [EFs], environmental factors, quality of interactions, preschool education

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