

## Working Memory Growth from Kindergarten to First Grade: Considering Impulsivity, Parental Discipline Methods and Socioeconomic Status

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**Abstract :** Working memory can be defined as a workspace that holds and regulates active information in mind. This study investigates individual changes in children's working memory from kindergarten to first grade. The main purpose of the study is whether parental discipline methods and child impulsive/overactive behaviors affect children's working memory initial status and growth rate, controlling for gender, minority status, and socioeconomic status (SES). A linear growth curve model with the first four waves of the Early Childhood Longitudinal Study-Kindergarten Cohort of 2011 (ECLS-K:2011) is performed to analyze the individual growth of children's working memory longitudinally (N=3915). Results revealed that there is a significant variation among students' initial status in the kindergarten fall semester as well as the growth rate during the first two years of schooling. While minority status, SES, and children's overactive/impulsive behaviors influenced children's initial status, only SES and minority status were significantly associated with the growth rate of working memory. For parental discipline methods, such as giving a warning and ignoring the child's negative behavior, are also negatively associated with initial working memory scores. Following that, students' working memory growth rate is examined, and students with lower SES as well as minorities showed a faster growth pattern during the first two years of schooling. However, the findings of parental disciplinary methods on working memory growth rates were mixed. It can be concluded that schooling helps low-SES minority students to develop their working memory.

**Keywords :** growth curve modeling, impulsive/overactive behaviors, parenting, working memory

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