The Effects of Enrollments in Pre-Kindergarten and Mother’s Highest Level Of Education on Children’s Visuo-Spatial Working Memory

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Abstract

Objective: To examine the effects of Pre-Kindergarten (Pre-K)/Daycare enrollment and mother’s higher education level on children’s working memory at 4 to 5 years of age.

Background: Low socioeconomic status (SES) has been linked to suboptimal child executive functioning. Research has shown that early childhood education improves performance in cognitive abilities, such as working memory. Working memory involves focus, attention and mental control, all of which are necessary for school preparedness.

Method: Children’s enrollment in Pre-K/Daycare and mother’s higher education level were documented. Children’s memory scores were obtained from the Wechsler Preschool and Primary Scale of Intelligence test (WPPSI-IV).

Results: Children who attended Pre-K/Daycare had higher visuospatial working memory scores compared to children who did not (M = 19.98 vs. M = 17.46, p = 0.048), irrespective of their mother’s higher education level.

Conclusion: Pre-K/Daycare attendance may have positive effects on visuo-spatial working memory development in 4-5 years olds. As working memory is a cognitive process crucial for school readiness, implementation of Universal Pre-K by New York City Department of Education may be a groundbreaking initiative to equalize educational preparedness.

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References


Figure 1. Means Working Memory Scores