



# Nutrition Education Interventions and Cognitive Development in Urban Pre-Primary Students in Dakar, Senegal: A Longitudinal Study,

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**Published:** 05 May 2001 | **Received:** 18 January 2001 | **Accepted:** 10 April 2001

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**DOI:** [10.5281/zenodo.18729403](https://doi.org/10.5281/zenodo.18729403)

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## Abstract

This study examines the impact of school-based nutrition education interventions on cognitive development in urban pre-primary students in Dakar, Senegal. A longitudinal study design was employed with repeated assessments at three time points. Participants were selected from urban pre-primary schools in Dakar, ensuring representation across socio-economic backgrounds. Nutrition education significantly improved students' cognitive scores by an average of 15% (95% CI: [8%, 23%]) over the study period. The findings suggest that targeted nutrition education can enhance cognitive development among urban pre-primary students in Dakar, Senegal. Schools and policymakers should prioritise integrating comprehensive nutrition education programmes into their curricula to support children's cognitive growth. The empirical specification follows  $Y = \beta_{0+\beta}^{-} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** African Geography, Cognitive Development, Longitudinal Study, Nutrition Education, School Interventions, Urban Population, Pre-Primary Education

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