

# Mathematical Intervention with Latin American Families and Young Children's Outcomes

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## Abstract

The development of early numeracy skills takes place within the home and school environments. Parental engagement in daily activities that incorporate numerical concepts plays a pivotal role in maximizing learning opportunities. In this study, we developed and implemented a family intervention program designed to promote numerical activities in the home setting. Our goal was to promote the use of mathematical concepts and enhance children's mathematical performance. Employing a pre-post intervention design, we conducted individual cognitive assessments on 115 Uruguayan children (mean age: 5.0 years; standard deviation: 0.5) across various domains, including mathematics, vocabulary, and general intelligence. We then organized three distinct groups: one focused on numeracy, another on literacy, and the third continued with their regular routines (business as usual). Parents assigned to the first two groups were extended invitations to participate in three workshops, during which they were introduced to both theoretical and practical tools to promote the respective academic domains. While our intervention suggested parental interest in participating in math workshops and in promoting academic skills at home, the results indicated that it did not produce the anticipated effect on mathematical skills. Practical and policy: This study presents an intervention on engaging parents in mathematical activities at home for promoting mathematical skills in Latin America, and it highlights challenges for designing effective interventions in the future.

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