

Early interventions to reduce vulnerabilities and improve childhood development

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doi: 10.1590/0102-311X00030519

In high-income countries, children born in socioeconomically underprivileged environments tend to lag behind on indicators of social capital and life advancement when compared to their better-off peers. These children, who are already born with intrauterine growth restriction or suffer malnutrition in the first year of life, show higher school drop-out and repetition rates, worse scholastic performance, more involvement in violence and crime, and lower intelligence quotient (IQ)¹.

Few such studies have been performed in low- and middle-income countries, where the most vulnerable children live. In 2010, an estimated 43% of children in low- and middle-income countries were malnourished or lived in extreme poverty². This is a huge number of children at risk of being left behind over the life course, having their development jeopardized, and failing to achieve their full potential.

To address this situation, programs have been implemented to benefit early development of these children. One such program aims to conduct home visits with interventions targeted to reduce such vulnerabilities³. Studies that seek to verify the effectiveness of these programs are extremely important. A systematic review in 2013 based on experimental studies, the majority of which in the United States, concluded that programs with home visits conducted by paraprofessionals (the equivalent of community health agents) were associated with small improvements in childhood neuropsychomotor development. Better results were obtained when the intervention was longer, beginning in the prenatal period, the health agents were properly trained to perform designated interventions to meet the families' needs, and the program focused on certain aspects rather than attempting to solve several problems at the same time. The interventions were also more effective when combined with programs that included nutritional improvements⁴.

This issue of CSP focuses on childhood developmental health in the context of a program of early childhood intervention through home visits, called "Primeira Infância Melhor" [Better Early Childhood]^{5,6}. This program aims to promote comprehensive development in early childhood through weekly community and home visits to families in situations of risk and social vulnerability. The objective is to develop family skills based on the families' own culture and experiences in educating and raising their children.

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The study was conducted in eight cities in Rio Grande do Sul State, including representative areas of that state in southern Brazil. The sample included 364 children participating in the program and a group of 207 controls recruited in the same class of the school where the children in the program were enrolled. The study's main limitation was its observational design. Since there was no randomization, differences in the pre-intervention variables tended to produce a confounding bias. The evidence produced in cohort-type observational studies, as reported here, always involves lower quality. To minimize this bias, the authors performed a multivariate adjustment via MANOVA (multivariate analysis of variance) and logistic regression.

The study's first objective was to identify the characteristics of the children and families participating in the Better Early Childhood program and associated with the worst childhood development from 4 to 6 years of age. Assessment of their development used the *Early Development Instrument* (EDI), answered by their teachers. Low family income, lower children's age, and early dropout from the program were the variables associated with greater risk of vulnerability in childhood development. The second objective was to compare the results of childhood development in the participating children versus a control group. No difference was observed between the two groups in the mean scores on the five dimensions of the early development scale. However, longer time in the program was associated with better results in development, suggesting modest effectiveness of the Better Early Childhood program.

The results demonstrate the difficulties in modifying complex social situations of poverty and in improving childhood development through weekly home visits. The authors suggest that a broader approach to social support involving integration with other programs such as Bolsa Família may be more effective.

Additional information

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