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Home-Based Early Intervention and the Influence of Family Resources on Cognitive Development | Articles

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Abstract

OBJECTIVE: To investigate whether early developmental intervention (EDI) can positively affect the trajectories of cognitive development among children from low-resource families.

METHODS: Longitudinal analyses were conducted of data from 293 children in the Brain Research to Ameliorate Impaired Neurodevelopment Home-based Intervention Trial, a randomized controlled trial of a home-based EDI program, to examine trajectories of Bayley Scales of Infant Development—Second Edition Mental Development Index (MDI) scores from 12 to 36 months of age among young children from high- and low-resource families in 3 low- to middle-resource countries.

RESULTS: A 3-way interaction among family resources, intervention group, and age was statistically significant after controlling for maternal, child, and birth characteristics (Wald $\chi^2(1) = 9.41, P = .002$). Among children of families with high resources, both the intervention and control groups had significant increases in MDI scores over time ($P < .001$ and $P = .002$, respectively), and 36-month MDI scores for these 2 groups did not differ significantly ($P = .602$). However, in families with low resources, the EDI group displayed greater improvement, resulting in significantly higher 36-month MDI scores than the control group ($P < .001$). In addition, the 36-month MDI scores for children in families with low resources receiving EDI did not differ significantly from children from high-resource families in either the EDI ($P = .509$) or control ($P = .882$) groups.

CONCLUSIONS: A home-based EDI during the first 3 years of life can substantially decrease the developmental gap between children from families with lower versus higher resources, even among children in low- to middle-resource countries.

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