



Early Interventions May Boost Academic Skills Among Disadvantaged Children

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Key Facts

The Family Check-Up (FCU) intervention is intended to prevent early conduct problems and support school readiness among children from low-income families.

FCU intervention combined with positive mother-child engagement predicted gains in academic skills.

Interventions like the FCU may help to increase academic success among low-income children.

In a recent study, we examined academic skills among children from low-income families. Specifically, we tested whether these skills were predicted by various factors including neighborhood cohesion, positive mother-child engagement, child self-regulation in early childhood, and the Family Check-Up (FCU) intervention. We found that higher positive mother-child engagement and child self-regulation predicted higher academic skills at school entry. Positive mother-child engagement combined with FCU intervention predicted gains in academic skills across the early elementary school years compared to national norms. Our findings suggest the FCU intervention leveraged positive mother-child engagement in early childhood to promote academic skills. Interventions like the FCU may therefore help to prevent academic skill deficits among children from low-income families before and after school entry.

Academic skills at school entry predict achievement in middle childhood and adolescence, as well as college attendance, earnings, and home ownership in adulthood.^{1,2} Large income gaps in academic skills are present at school entry and persist into secondary school, as children raised in poverty show elevated rates of grade retention, special education placement, and school dropout.^{3,4} To help reduce income-related achievement gaps, it is important to clarify how early childhood interventions can promote the academic skills of children living in poverty.

Across three U.S. cities between 2002 and 2003, 731 families in Women, Infants, and Children Nutritional Supplement (WIC) programs were recruited to participate in a multisite randomized controlled trial of the Family Check-Up (FCU) intervention to prevent early conduct problems and support school readiness. All children were

deemed “high-risk” for early conduct problems based on living below or just above the poverty line and having additional family, child, and/or socioeconomic risk factors. The FCU is a brief (typically 3-4 sessions per year) family-centered intervention for preventing early conduct problems, incorporating motivational interviewing to promote improvements in parenting skills and address other domains, such as maternal depression, that compromise parental functioning.

Though the FCU did not specifically target children’s academic skills, studies have found that it improved them by increasing mothers’ early positive behavior support or tendency to engage children in lengthy interactions and discussions with periodic positive behavior, reinforcement, and prompts for continued interaction.⁵ The FCU has also been shown to reduce problem behavior by improving dyadic positive engagement—that is,

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interactions in which mother and child show high positive or neutral engagement with one another, which is related to greater positive behavior support.^{6,7}

Exploring factors that impact academic skills among children from low-income families

We used a subsample of the original 731 racially diverse, low-income families recruited for the FCU trial. This subsample included 527 biological mothers and children. Mothers identified children as non-Hispanic White (45.5%), non-Hispanic Black or African American (27.5%), or other racial-ethnic groups (26.9%), such as Asian American, Native American, mixed, and biracial. A smaller percentage of mothers were high-school graduates (78.2% to 79.9%) than among US adult women (83.7%), and their average annual household income (\$15,000 to \$24,984) was considerably less than the \$42,409 median income in 2002.^{8,9}

In our study¹⁰, we conducted statistical analyses to examine the effects of early childhood (i.e., ages 2 to 5) levels of neighborhood cohesion, family income, maternal education, dyadic positive engagement, child self-regulation, and the FCU intervention, and their interactions on academic skills across ages 5, 7.5, and 8.5. We compared children's skill standings to national averages to identify academic resilience using standard scores on the norm-referenced Woodcock-Johnson Tests of Achievement III (WJ-III).¹¹

FCU intervention plus positive mother-child engagement predicted gains in academic skills

We found that children with higher initial standard scores showed a greater age-related drop after school entry. Students' academic skills at the higher and lower ends of maternal education differed substantially. Dyadic positive engagement was correlated positively with family income, maternal education, child self-regulation, and academic skills. Higher dyadic positive engagement and self-regulation, as well as maternal education in early childhood, predicted higher academic skills at age 5. Children in our low-income sample scored on average just below or at the means for the preschool- and school-age norming groups, so their academic skills were not far from national averages. Having a more educated mother or being non-Hispanic Black predicted a greater drop in standard scores from ages 5 to 8.5, but the standard scores of children with more highly educated mothers were still above average. Children who received the FCU intervention and

experienced higher dyadic positive engagement in early childhood showed modest increases in their academic skills from ages 5 to 8.5.

Early interventions may help reduce income-related achievement gaps

Our findings suggest that early childhood interventions such as the FCU, designed to improve mother-child engagement, can promote academic skills and resilience among children from low-income families. This type of family support may be especially helpful for the most disadvantaged.

As parents are often children's first and most influential teachers, engaging families is key for early childhood programs offered by schools, community services, and agencies. As patterns of parent-child interactions stabilize over time, it is key to engage parents in early childhood not only to promote positive parent-child engagement but also to prevent coercive interactions that exacerbate young children's problem behavior and school readiness.

Early interventions like the FCU, targeting positive mother-child engagement and child self-regulation, can promote school readiness and academic resilience. Clarifying strengths within families living in poverty that shape skill acquisition prior to school entry may then help reduce income achievement gaps.

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