

The M-PACT Project

Math for Parents and Children Together



The Challenge

Disadvantaged children are particularly at risk for entering kindergarten behind their more advantaged peers, setting up an achievement gap that continues through later school and into adulthood. Early math skills are the strongest predictor of both later math and reading skills. However, many parents spend little time promoting their children's math skills at home. Interventions to support parent's promotion of their children's math skills in the home environment may help build math and reading skills and narrow this gap. Unfortunately, few home-based interventions for low-income parents emphasize children's early math learning and even fewer have been rigorously evaluated.

The Study

M-PACT, Math for Parents and Children Together, is a program that teaches parents what effective math instruction for young children looks like, shows them how to integrate math learning into everyday routines, and encourages parents to spend time in these activities.

Building on the principles of the successful Parents and Children Together (PACT) project, which increased the time low-income parents spent reading to their children, M-PACT uses insights from behavioral science to promote parents' engagement in building children's developmentally-relevant math skills.

Chicago-area parents with children ages 3-4 who are currently enrolled in subsidized preschool programs will be randomly assigned to one of three treatment groups or a control group. The first treatment group will be lent a digital tablet preloaded with developmentally appropriate, math-focused applications. The second group will receive an activity booklet with developmentally appropriate, math-focused activities for parents to do with their child. The third group will receive the same intervention as group two and in addition will receive behaviorally informed text messages. The control group will receive no math tools or behaviorally informed intervention.

The goal of M-PACT is to test how each of these different interventions improves **parents' confidence in building their children's math skills, decreases parents' math anxiety, and increases children's relevant math skills**, such as: numeracy, number recognition and relationship, and counting. The study is scheduled to begin in 2016 and conclude in 2020.

Who We Are

The Behavioral Insights and Parenting Lab

Research shows that a variety of low-cost, light-touch "behavioral nudges" can successfully change behavior in a number of key arenas of life, including health and financial savings behavior. The BIP Lab is dedicated to experimental research to investigate whether these approaches can make a difference in parenting strategies to promote children's development in low-income families. The BIP Lab was founded in 2014 by Harris School Professors Ariel Kalil and Susan Mayer.

Directors

Ariel Kalil, Ph.D. is a professor at The University of Chicago Harris School of Public Policy, where she also directs the Center for Human Potential and Public Policy. She is a developmental psychologist who studies economic conditions, parenting, and child development. In addition to her work at the BIP Lab, her current research examines the historical evolution of income-based gaps in parenting behavior and children's cognitive and non-cognitive skills.

Susan E. Mayer, Ph.D. is a professor at The University of Chicago Harris School of Public Policy. She has published numerous articles on the measurement of poverty, the effect of growing up in poor neighborhoods, and the effect of parental income on children's well-being. In addition to her work at the BIP Lab, she is engaged in a number of studies of intergenerational economic mobility.