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New Program Helps Improve Toddlers' Self-Control Skills and Healthy Eating Habits

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PRESS RELEASE

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Promoting toddlers' self-regulation and healthy eating habits among families living in poverty: A randomized controlled trial of Recipe 4 Success

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Two of the best predictors of life-long health and well-being are early childhood self-control skills and healthy eating habits. A new program that teaches parents how to cook with their 2-year-olds is helping toddlers excel on both fronts. Doing things like stirring ingredients together without spilling and singing a song while something is in the microwave helps toddlers learn multiple important self-control skills, like paying attention, controlling their bodies, waiting patiently, and cooperating with their parents. Toddlers also get excited about being involved in the "grown-up" activity and are more likely to try the new foods they help make. Previous research has shown that self-control in preschool predicts adult outcomes like higher incomes and fewer health problems. Similarly, healthy eating habits in preschool predict how often adults eat their fruits and vegetables.

The Recipe 4 Success program was co-developed and rigorously tested by a team of researchers from the University of Wisconsin-Madison and The Pennsylvania State University and staff members of home visiting programs in seven cities, towns, and rural areas across Wisconsin and Pennsylvania. The results of the second randomized controlled trial of Recipe 4 Success have just been published in the journal *Child Development*.

"It's encouraging that parents and toddlers are so excited about cooking healthy foods together. Parents easily learn new strategies that turn daily routines, like making lunch, into a form of quality time with their toddlers that is both educational and fun," said lead author, Robert Nix, professor of human development and family studies at the University of Wisconsin-Madison. "We were happy to see that parents could use what they learned in the special cooking lessons to support their toddlers' development in other activities, like playing with blocks."

Recipe 4 Success was delivered as part of the Early Head Start home visiting program, one of several evidence-based home visiting programs designed for young families living in poverty and funded by the federal government. Home visiting programs partner with parents to promote the cognitive, social, emotional, and physical development of infants and toddlers, so they are prepared to succeed in school.

“Home visits are such a great way to ensure all children have the opportunity to thrive. My colleagues and I were so proud to collaborate with the dedicated home visitors who work hard every day to best serve the families in their programs. Together, we made home visits even better than they already were,” continued Nix. “Parents often participate in home visits because they want their children to be well-behaved and do well in school, which both depend on self-control skills. When Recipe 4 Success lessons were incorporated into home visits, toddlers developed better self-control skills and were willing to eat more nutritious foods, which may reduce common meal-time struggles and help children stay healthy and strong. Our next goal is to give Recipe 4 Success to as many home visiting programs as possible so even more families can benefit.”

Families were recruited through organizations providing Early Head Start home visiting services. To be eligible, families had to be able to complete assessments in English and have a toddler. The study included 242 parents and their toddlers. Thirty-seven percent of families were white, 25% were Black, 19% were Latino, 17% were Multiracial, 2% were Asian American, and less than 1% were Native American. Ninety-one percent of caregivers were mothers, 5% were fathers, and 4% were other relatives. Forty-seven percent of parents were single or did not live with a partner. Sixty-five percent had a high school degree or less; 60% did not work outside the home; 20% had a part-time job; and 20% had a full-time job. Sixty-nine percent of families lived below the federal poverty threshold, and an additional 25% of families lived below 200% of that threshold; median family income was $1,555 per month. Fifty-one percent of toddlers were girls and 49% were boys. At the beginning of the study, toddlers were on average 2.5 years old.

Participating families were randomly assigned to receive the Recipe 4 Success preventive intervention across 12 weeks, delivered by their regular Early Head Start home visitors during their regularly scheduled home visits, or continue to receive their usual practice Early Head Start home visits. Families who participated in Recipe 4 Success did not receive extra home visits or extra-long home visits. The program included sequenced and highly structured food preparation lessons, which provided countless opportunities for parents to practice sensitive scaffolding of children’s self-control skills and learn responsive food parenting practices. The lessons also provided many opportunities for toddlers to practice self-control and be exposed to new healthy foods. Each lesson required about 45 minutes of a typical 90-minute home visit. The goal was

to help parents see how routine daily activities they had to do anyway, like cooking, could become a way to spend high-quality special time with their toddlers that also taught critically important new skills.

After families completed the cooking lessons, they were tested to see whether they could apply the skills they had learned to other situations, such as building a block tower or completing a puzzle. The research found that parents who participated in the Recipe 4 Success program, compared to parents who continued with regular home visits, were more engaged and responsive and provided better support for their toddlers' learning of new skills, as demonstrated in video-recorded parent-child interaction tasks. They also were more effective in the way they introduced their toddlers to novel healthy foods. Moreover, their toddlers had better self-control skills, greater attention spans, and were more compliant, as demonstrated in waiting tasks, observer ratings, and parent reports. They also were more likely to continue helping to make and eat healthy foods at home, as demonstrated by food and activity diaries, collected over three days.

The authors acknowledge some limitations to the study. Although the trial included many Latino families it had to exclude some Latino families that only spoke Spanish due to important differences in their experiences with the study, such as housing instability among more marginalized communities. Although this study demonstrated important intervention effects of Recipe 4 Success, it could not document exactly what aspects of the program accounted for parent and toddler change. For example, it may be that both the new lessons themselves and having parents be so much more involved in the focal activities that both contributed to program effects. The independent contributions of those different components is the topic of another study, currently under review.
Recipe 4 Success lessons are a cost-effective way to boost the impact of home visits. This study demonstrates how carefully designed and tested curricula can help maximize the effectiveness of human services.

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Summarized from *Child Development*, "Promoting toddlers' self-regulation and healthy eating habits among families living in poverty: A randomized controlled trial of Recipe 4 Success" by Nix, R.L. (University of Wisconsin-Madison), Gill, S. (Pennsylvania State University-York), Hostetler, M.L., Feinberg, M.E., Francis, L.A.,

Stifter, C.A., (The Pennsylvania State University), McNeil, C.B. (University of Florida), Kidder, S., Jones, D.E. (The Pennsylvania State University), Park, Y.R, Kim, C.N., Engbretson, A.M, Braaten, S.M. (University of Wisconsin-Madison), and Tamkin, V.L. (Santa Clara University). Copyright 2023 The Society for Research in Child Development, Inc. All rights reserved.