

Child Care & Early Education RESEARCH CONNECTIONS

Interventions to Promote Young Children's Self-Regulation and Executive Function Skills in Early Childhood Settings

[Self-regulation](#) refers to the ability to control one's emotions, behaviors, and cognitions. [Self-regulation](#) includes both emotional regulation skills (the ability to moderate emotions through cognitive and behavioral strategies) and executive function skills (which include working memory, inhibitory control and cognitive flexibility). These components of self-regulation work together and have been shown to predict school readiness and academic performance. Previous [research](#) indicates that children who have difficulty regulating their emotions and behaviors have lower academic achievement and have been found to receive less instruction and to be less engaged in learning. Additionally, certain groups of children who display behavioral problems are more susceptible to being [excluded](#) from preschool. As a result early intervention that can target the promotion of self-regulation skills is important. In recognition of the importance that behavioral self-regulation and social-emotional development plays in improving outcomes for young children, the Office of Child Care recently released a [Policy Memorandum](#) to all State, Territorial and Tribal Lead Agencies administrating child care programs under the Child Care and Development Block Grant, highlighting state policies to promote the social-emotional and behavioral health of young children in child care settings.

This **Topic of Interest** highlights research specifically focused on interventions to improve young children's self-regulation and executive function skills, in preschool and kindergarten settings.



Overviews of Research on Self-Regulation Interventions

The following recent articles provide a summary of research on various self-regulation interventions that have been conducted with preschoolers:

- [School readiness and self-regulation: A developmental psychobiological approach \(2015\)](#)
- [The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure \(2012\)](#)
- [Interventions shown to aid executive function development in children 4-12 years old \(2011\)](#)

Large-Scale Randomized Control Trials

Several large-scale randomized control trials examining the promotion of self-regulation and executive function skills have been conducted in preschool and kindergarten settings.

Chicago School Readiness Project (CSRP) was a classroom-based intervention designed to improve low-income preschool age children's self-regulation skills. It combined teacher training in classroom management strategies (based on the [Incredible Years](#) program) with a classroom-based mental health consultant.

- [CSRP's impact on low-income preschoolers' preacademic skills: Self-regulation as a mediating mechanism \(2011\)](#)

Foundations of Learning (FOL) expanded on CSRP and tested the intervention in 71 preschool centers in Newark, New Jersey and Chicago, Illinois.

- [Using classroom management to improve preschoolers' social and emotional skills: Final impact and implementation findings from the Foundations of Learning demonstration in Newark and Chicago \(2013\)](#)

Promoting Alternative Thinking Strategies (PATHS) is a social emotional curriculum designed to reduce children's problem behavior by supporting their ability to self-regulate. Twenty Head Start classrooms in two Pennsylvania communities participated in a study to evaluate the effectiveness of the curriculum in a preschool setting.

- [Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum \(2007\)](#)

Head Start REDI (Research-based Developmentally Informed) is a program that was designed as an enrichment intervention for Head Start classrooms. The intervention included lessons, center-based extension activities and training in specific teaching strategies. It was designed to

promote language and literacy skills and social-emotional competence and included the use of the preschool PATHS curriculum.

- [Promoting academic and social-emotional school readiness: The Head Start REDI program \(2008\)](#)
- [Effects of Head Start REDI on children's outcomes 1 year later in different kindergarten contexts \(2014\)](#)

Tools of the Mind is a play-based preschool curriculum combined with teacher professional development designed to promote the development of executive function as a means to enhance student learning and engagement.

- [Preschool program improves cognitive control \(2007\)](#)
- [Educational effects of the Tools of the Mind curriculum: A randomized trial \(2008\)](#)
- [Achievement and self-regulation in pre-kindergarten classrooms: Effects of the Tools of the Mind curriculum \(2014\)](#)
- [Closing the achievement gap through modification of neurocognitive and neuroendocrine function: Results from a cluster randomized controlled trial of an innovative approach to the education of children in kindergarten \(2014\)](#)

The *Head Start CARES* demonstration evaluated the effects of three classroom-based approaches to enhancing children's social-emotional development, the Incredible Years Teaching Training Program, PATHS preschool curriculum, and Tools of the Mind.

- [Impact findings from the Head Start CARES demonstration: National evaluation of three approaches to improving preschoolers' social and emotional competence \(2014\)](#)

Small-Scale Experimental Studies

Mindfulness-based practices such as meditation and yoga have also been tested as a way to promote self-regulation among preschool children.

- [Enhancing preschoolers' self-regulation via mindful yoga \(2015\)](#)
- [Promoting prosocial behavior and self-regulatory skills in preschool children through a mindfulness-based Kindness Curriculum \(2015\)](#)

Circle Time games are games that are variations of popular children's games, such as 'Red Light, Green Light' and 'Freeze dance'. One study incorporated these games into the preschool classroom through the use of playgroups. The goal of the intervention was to improve behavioral self-regulation in a sample of preschoolers.

- [Red light, purple light: Findings from a randomized trial using circle time games to improve behavioral self-regulation in preschool \(2011\)](#)

A summer treatment program targeted to pre-kindergarteners with externalizing behavior problems combined a behavior modification system, parent training, a social emotional/self-regulation curriculum (that included circle time games), and a literacy curriculum. The goal of the intervention was to improve school readiness outcomes including self-regulation skills.

- [Improving school readiness in preschoolers with behavior problems: Results from a summer treatment program \(2014\)](#)

Datasets

Explore the [Head Start CARES dataset](#)

Current OPRE Funded Project

The Office of Planning Research and Evaluation has commissioned a series of reports on the topic of [Self-Regulation and Toxic Stress](#). Two reports have been released so far: [Foundations for Understanding Self-Regulation from an Applied Developmental Perspective](#); and [A Review of Ecological, Biological, and Developmental Studies of Self-Regulation and Stress](#). A third report examining the evidence for interventions to promote self-regulation is forthcoming and will be titled: *A Comprehensive Review of Self-Regulation Interventions from Birth through Young Adulthood*. Finally, a fourth report that examines implications for program and practice will also be released.

[Explore](#) additional resources on a range of topics related to self-regulation and executive function.

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