OVERVIEW

Problem behaviors in early childhood (birth to five) are associated with poor outcomes in adolescence and adulthood, including delinquency, engagement in criminal activity and violence, and depression (Bornstein, Hahn, & Haynes, 2010; Liu, 2004; O’Connell, Boat, & Warner, 2009). These problem behaviors can be externalizing or internalizing. Externalizing behaviors are directed outward and include aggression, disruptive behavior, and oppositional defiance; internalizing behaviors are directed inward and include withdrawal, anxiety, or depression.

This research brief synthesizes experimental evaluations of 50 programs. The evaluations assessed program impacts on externalizing behaviors and/or internalizing behaviors among children ages birth to five. Evaluations of twenty-six programs assessed externalizing behaviors exclusively; 23 program evaluations assessed both externalizing and internalizing behaviors; and one assessed internalizing behaviors exclusively. Most of the evaluations focused on preschool children, or those ages three to five.

KEY FINDINGS

Overall, 36 of the 50 programs were found to have positive (that is, beneficial) and statistically significant (p<.05) impacts on either externalizing or internalizing behaviors.

- A slightly higher proportion of positive significant impacts were found for externalizing behaviors (65 percent of programs worked) than for internalizing behaviors (54 percent of programs worked).

Positive, significant impacts on externalizing behaviors were more frequent when programs:

- provided specific training to parents or teachers, or delivered programming using multiple approaches;
- were based in preschools;
- used teachers, trained facilitators, or therapists to deliver the programs; and/or
- had a standardized curriculum.
Positive significant impacts on internalizing behaviors were more frequent when programs:

- targeted children versus parents or teachers;
- were based in preschools;
- used teachers to deliver the programs; and/or
- specifically targeted internalizing behaviors.

Although eight of 23 programs successfully reduced both internalizing and externalizing behaviors, no clear commonalities emerged across their implementation approaches.

**BACKGROUND**

The need for effective interventions that address these problem behaviors early is evident from the research. Young children who exhibit these behaviors may experience more difficulty in bonding to family members and forming healthy peer relationships, though cause and effect can be difficult to disentangle (Morris, Silk, Steinberg, Myers, & Robinson, 2007; Shonkoff & Phillips, 2000). Furthermore, these behaviors can interfere with academic performance (Masten et al., 2005). Recent research finds that a child’s level of social competence in kindergarten, which includes their ability to control behaviors and regulate emotions, can predict life outcomes at age 25, including high school graduation, employment, and arrests (Jones, Greenberg, & Crowley, 2015). Intervention during early childhood can prevent behaviors from becoming routine or more serious as the child grows older (Powell, Dunlap, & Fox, 2006). Therefore, it is critical to identify the best approaches for reducing these problem behaviors in early childhood and to highlight the areas where more research is needed.

**ABOUT THE STUDY**

This brief synthesizes findings from random-assignment, intent-to-treat evaluations\(^4\) of 50\(^b\) programs for children ages birth to five, that assessed impacts on either internalizing and/or externalizing behaviors. Most evaluations included preschool-aged children, ages three through five. All evaluations were retrieved from the Child Trends’ What Works/LINKS database of social interventions designed for children and youth. (LINKS refers to Lifecourse Interventions to Nurture Kids Successfully.)

While social-emotional development encompasses a variety of skills and behaviors, this brief focuses on two specific types of problem behaviors: (a) externalizing behaviors, and (b) internalizing problems. For this synthesis, externalizing behaviors are defined as “problems with noncompliance, and antisocial, aggressive, and other uncontrolled behaviors” (Bornstein et al., 2010). Internalizing problems include “withdrawal and anxiety, as well as feelings of inferiority, self-consciousness, shyness, hypersensitivity, and somatic complaints” (Bornstein et al., 2010), although this review did not uncover any evaluations that assessed somatic complaints.\(^c\)

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\(^a\)Every study has a treatment group and a control group, and random assignment (that is, a lottery system) was used to determine placement of participants into treatment and control groups. Analysis is conducted based on assignment to the treatment group or the control group, not whether or not the subject(s) received the treatment.

\(^b\)Three programs used different intervention approaches among their evaluations: Incredible Years (3 approaches), Parent-Child Interaction Therapy (2 approaches), and Triple P (3 approaches). For the purposes of understanding the implications of these approaches, these interventions are included in the findings as separate programs, even though they are adaptations or variations of an established program brand or name. More information on these programs is provided in Tables 1 and 2.

\(^c\)Somatic complaints refer to chronic complaints of physical ailments. Sometimes these complaints persist despite negative evaluations by medical professionals.
Findings for the programs in this study are reported using the following categories:

**FOUND TO WORK**
- A program evaluation was coded as “found to work” if a positive or beneficial statistically significant impact ($p<0.05$) was found for the full sample on the majority of relevant outcome measures. An evaluation with multiple follow-ups was coded as “found to work” if a positive statistically significant impact was found at the majority of follow-ups, or at the final follow-up, suggesting a delayed impact. Programs with multiple evaluations were coded as “found to work” if a pattern of positive significant impacts was found in the majority of evaluations.

**MIXED FINDINGS**
- A program evaluation was coded as having “mixed findings” if it found significant subgroup differences in effectiveness (for example, by gender or race/ethnicity). Also, an evaluation with multiple follow-ups was coded as having “mixed findings” if impacts on a particular outcome were split, such that half showed positive significant impacts and half had mixed, null, or negative findings. Programs with multiple evaluations were coded as having “mixed findings” if the evaluations were split evenly between not working and working for a particular outcome.

**NOT FOUND TO WORK**
- A program evaluation was coded as “not found to work” if positive significant impacts were found for fewer than half of the relevant outcome measures. An evaluation with multiple follow-ups was coded as “not found to work” if positive significant impacts were found in fewer than half of the follow-ups. Programs with multiple evaluations were coded as “not found to work” if fewer than half of the evaluations found a pattern of positive significant impacts.

These categories were applied when at least four programs were identified that shared a particular characteristic, such as the setting of the intervention, or used a specific approach in common, such as home visiting or parent training. However, no formal meta-analysis was conducted, so these findings should be considered preliminary. Where a given approach was used by three or fewer programs and the approach was supported by existing research or practice wisdom, we discuss the approach in the section on “Needed research”.

**FINDINGS**

Overall, 36 of the 50 rigorously evaluated programs were found to have a positive impact on either externalizing or internalizing behaviors.
- 32 of 49 programs (65 percent) improved externalizing behaviors.
- 13 of 24 programs (54 percent) improved internalizing behaviors.
- Of the 23 programs that assessed impacts on both behaviors, eight (35 percent) worked for both internalizing and externalizing behaviors.

Overall, interventions characterized by a variety of approaches, settings, targets, and providers worked to reduce externalizing behaviors, suggesting that this cluster of behaviors can be improved using a number of different approaches.

Fewer evaluations focused on interventions to reduce internalizing behaviors, which reflects the pattern of research in the field of socio-emotional development more generally. Internalizing behaviors are less frequently assessed among young children, in part because they can be difficult to measure when a child’s verbal skills are limited (Tandon, Cardeli, & Luby, 2009). However, 24 programs were identified that assessed impacts in this area.

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*Note: These coding methods are identical to those used for other Child Trends/LINKS Syntheses.

*Twenty-six programs assessed impacts on externalizing behaviors only; one program assessed impacts on internalizing behaviors only; the remaining 23 programs assessed impacts on both externalizing and internalizing behaviors.
Almost all programs included in this synthesis targeted children who were considered at risk of negative life outcomes, such as substance abuse or arrest, because of their behavior and/or because they were from low-income households. Few programs targeted children with diagnosed disorders, such as oppositional defiant disorder or posttraumatic stress disorder, and most programs were intentionally focused, at least in part, on improving either externalizing or internalizing behaviors.

**EXTERNALIZING OUTCOMES**

Thirty-two programs demonstrated positive (that is, beneficial) and statistically significant impacts on externalizing behaviors among young children birth to five. Twelve programs were found not to work, and five programs had mixed impacts on externalizing behaviors.

**FOUND TO WORK**

*Variety of intervention approaches*

Several intervention approaches were found to significantly improve or reduce the frequency of externalizing behaviors. Programs that provided training for parents were the approach most commonly evaluated, and these were successful overall: 13 of 16 were found to work. Teacher training also worked in four of five evaluations, as did child-targeted interventions, with six of nine found to work.

*Variety of program settings*

Programs delivered in variety of settings were found to work. Most programs took place in preschools; 12 of 19 of these worked. Seven of 12 home-based programs worked; six of eight programs based in a community space worked; four of five programs taking place in a therapist’s office worked; and three of four programs that took place in multiple settings during their implementation, worked.

*Program providers*

Most programs were delivered by a trained facilitator; 22 of 35 programs implemented by a trained facilitator worked. Programs using teachers (five of eight) or therapists (four of six) as the program provider also worked, as did programs that used more than one type of provider (four of six).

*Curriculum*

Twenty-six programs used a specified curriculum; of these, 17 worked for improving externalizing behaviors.

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**Incredible Years adaptations**

Several adaptations of The Incredible Years program have been evaluated, including multiple intervention approaches. The Incredible Years program is a series of training programs to prevent problem behaviors and promote social, emotional, and academic competence. In findings presented elsewhere in this document, three general types of the Incredible Years training are included as separate programs. These are parent-training only, teacher-training only, and child-focused only. All adaptations of the Incredible Years (including combinations of these three types) worked for reducing externalizing behaviors, except for an adaptation that included home-visiting, which had mixed findings.

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*Incredible Years adaptations have not been frequently assessed, so the findings from this program include fewer than four evaluations.*

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5 Most programs assessed impacts on 3- and 4-year-olds.
6 In this type of intervention, teachers are trained and/or receive coaching on behavior management and promoting social-emotional skills.
7 A staff member without a specialized degree, such as a therapist or teacher.
MIXED FINDINGS

Home visiting programs\textsuperscript{i} had mixed findings for reducing externalizing behaviors. Four of eight such programs were found to work.\textsuperscript{14} All home-visiting programs targeted parents only.

NOT FOUND TO WORK

Programs using nurses or doctors as the primary facilitators were, in general, not found to work for this outcome; only one of four worked for reducing externalizing behaviors.\textsuperscript{15} All of these programs targeted parents in their intervention. Eleven interventions used more than one approach, including a mixture of child, parent, and/or teacher training, along with a combination of case management, therapy or home visiting; five of these 11 interventions worked.\textsuperscript{16}

INTERNALIZING OUTCOMES

Of the 23 programs that assessed internalizing behaviors, 13 demonstrated positive (that is, beneficial) and statistically significant impacts on internalizing behaviors among young children. Seven programs were not found to work; four had mixed results. Fourteen of 23 programs (61 percent) that assessed internalizing behaviors explicitly targeted the reduction of these behaviors as a goal.

FOUND TO WORK

\textbf{Intervention type}

Five of five programs that were child-focused\textsuperscript{j} worked.\textsuperscript{17}

\textbf{Provider}

Five of six programs where teachers delivered the program worked for reducing internalizing behaviors.\textsuperscript{18}

\textbf{Setting}

Interventions (eight of 11) based in preschools worked for reducing internalizing behaviors.\textsuperscript{19}

\textbf{Targeting internalizing}

Of the 14 programs that explicitly focused on reducing internalizing behaviors, eight worked to reduce these behaviors.\textsuperscript{20}

MIXED FINDINGS

Interventions that were conducted exclusively as home visiting or as parent-training had mixed impacts: for each type, two of four worked.\textsuperscript{21} Similarly, half (two of four) of interventions that had a nurse or doctor as the primary facilitator worked.\textsuperscript{22} Providing training to any type of facilitator saw mixed results for internalizing behaviors (nine of 18 that provided training achieved reduced internalizing behaviors).\textsuperscript{23} Similarly, having a specific curriculum produced mixed results for reducing internalizing behaviors (five of 10 such programs worked).\textsuperscript{24} It is important to note, however, that these findings do not suggest that training and curriculum are not a beneficial practice; the mixed results of this practice could be due to many other factors and is may not be directly tied to training or use of curriculum. Alternatively, it may be that only some types of training or curricula are effective.

\textsuperscript{i} Parents and/or children are trained or coached in the home

\textsuperscript{j} These interventions have a set curriculum that is taught to children, typically in preschools
NOT FOUND TO WORK

Interventions that used more than one approach (e.g., parent-training and teacher-training) were not found to work: only two of eight of these worked for reducing internalizing behaviors.\textsuperscript{25} Targeting both children and parents did not work: only one of four such programs had positive impacts.\textsuperscript{26} Interventions that used trained facilitators (a facilitator other than teachers, therapists, etc.) were not found to work (four of nine had positive impacts\textsuperscript{27}), nor were interventions with more than one type of facilitator (only one of four such interventions worked).\textsuperscript{28}

BOTH INTERNALIZING AND EXTERNALIZING BEHAVIORS

Of the 23 that assessed impacts on both, eight programs worked for reducing both internalizing and externalizing behaviors.

FOUND TO WORK

No specific intervention approaches characterized the majority of successful programs.

MIXED FINDINGS

Parent training\textsuperscript{9} and child-focused interventions had mixed findings: for each type, two of four programs worked for both internalizing and externalizing behaviors.\textsuperscript{29} Programs using teachers as providers had mixed findings (three of six worked for both behaviors).\textsuperscript{30} Programs based in a school had mixed results (five of ten worked).\textsuperscript{31}

NOT FOUND TO WORK

Reducing both internalizing and externalizing behaviors with a single program appears to be difficult. Just one of four home visiting programs\textsuperscript{32} and one of eight programs using more than one type of intervention\textsuperscript{33} worked for reducing both types of behaviors.

Using trained facilitators was not found to work for reducing both behaviors (two of eight worked for both);\textsuperscript{14} neither was using nurses or doctors as providers (just one of four worked),\textsuperscript{26} nor using more than one type of provider (one of four worked).\textsuperscript{15} Also, providing training, regardless of provider type, did not work (six of 18 such programs worked for improving both types of behaviors).\textsuperscript{37}

Having a specific curriculum was also found not to work in reducing both types of behaviors (three of ten such programs worked).\textsuperscript{38}

TREATMENT VS. UNIVERSAL AND TIERED PROGRAMS

Ten programs reviewed were treatment programs that worked with children, or with families of children, who were already demonstrating internalizing or externalizing behaviors. Seven of these worked for reducing either internalizing or externalizing behaviors. Thirty-eight programs were universal in their approach: they worked at the classroom or community level with all children or parents, regardless of their current behavioral status. Of universal programs, twenty-seven worked for either internalizing or externalizing behaviors. Two programs were tiered, meaning they worked both at a universal level, and more intensively with children or families who were demonstrating, or at risk of demonstrating, these behaviors. One of these tiered programs worked for both internalizing and externalizing, the other only worked for internalizing.

\textsuperscript{9} Parents or caregivers are trained in group or individual sessions outside of the home.
NEEDED RESEARCH

A variety of program approaches have been found to be effective for reducing early childhood externalizing behaviors. However, while programs that focused intentionally on internalizing behaviors among young children were more successful in reducing them than programs that did not, fewer have been found to work for internalizing than for externalizing behavior. More evaluations for programs intended to reduce internalizing behaviors among this age group are needed in order to draw strong conclusions about successful intervention approaches. There is also a need for more widespread use of valid screening and assessment instruments for internalizing behavior among young children, if we are to expand this knowledge base.

Testing innovative program delivery approaches is another important area for future research. Reaching working parents and hard-to-reach, marginalized populations through self-guided training using technology, for example, is a promising approach for developing and scaling up effective programs. A few such promising programs that rely on technology emerged in this review: Triple-P Online, containing eight self-guided, online training modules, worked in reducing externalizing behaviors, as did the Telephone-Assisted Behavioral Family Intervention in Germany, which gave families a parenting book and access to regular telephone calls with a child psychologist. This intervention also reduced internalizing behaviors.

Some programs were able to achieve impacts relatively quickly, and their approaches should be studied further. For example, Family Check-up reduced externalizing behaviors after 7.5 hours of home visiting. Six programs reduced externalizing behaviors after spending 12 hours or less with participants. Delivering efficient and effective programming in short-term interventions is an area deserving further research.

DISCUSSION

Many program approaches are successful at reducing externalizing behaviors among young children. Programs targeting parents and teachers are especially successful and should continue. Innovative approaches to program delivery, including technology-based or self-guided training, should be explored to scale up these successful programs and reach families who struggle to attend trainings or commit to home-visiting. While programs that used teachers as facilitators and focused on children were more successful at reducing internalizing behaviors, more research is needed on what works best to reduce these behaviors among young children; few approaches were successful across programs.

In addition, longitudinal studies following participants over time are especially important for assessing the longer-term benefits of these programs and of other early intervention efforts.
### What Works for Reducing Problem Behaviors in Early Childhood: LESSONS FROM EXPERIMENTAL EVALUATIONS

<table>
<thead>
<tr>
<th>Program</th>
<th>Externalizing</th>
<th>Internalizing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Al’s Pals</strong>, an early childhood curriculum that aims to develop resiliency through increasing social-emotional competence.</td>
<td>✗</td>
<td>✗</td>
<td>• 3 studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• No significant impacts on negative coping strategies (venting and aggression).</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• No significant impacts on positive coping.</td>
</tr>
<tr>
<td><strong>Chicago School Readiness</strong>, a teacher-training intervention that provides coaching and aims to reduce stress for teachers.</td>
<td>✓</td>
<td>✓</td>
<td>• 1 study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impacts on externalizing behaviors.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impact on internalizing behaviors.</td>
</tr>
<tr>
<td><strong>Child Health Supervision</strong>, a home visiting program providing teen mothers with physical examinations, counseling, and health information.</td>
<td>✗</td>
<td>✓</td>
<td>• 1 study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• No significant impacts on problem behaviors at 5 years.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impact on self-confidence at 5 years.</td>
</tr>
<tr>
<td><strong>Creative Dance and Movement</strong>, an interactive curriculum in which children are engaged in inventive dance and movement activities.</td>
<td>✓</td>
<td>✓</td>
<td>• 1 study</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impacts on externalizing behaviors.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impact on internalizing behaviors.</td>
</tr>
<tr>
<td><strong>DARE to be You</strong>, an early childhood program that includes parent and child training workshops to encourage children to resist alcohol and drug use.</td>
<td>✓</td>
<td>✓</td>
<td>• 1 study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impacts on oppositional and other problem behaviors.</td>
</tr>
<tr>
<td><strong>Early Head Start</strong>, a community-specific program that tailors services (including home-based and center-based services) to support the needs of low-income families with infants under age 3.</td>
<td>✓</td>
<td>✗</td>
<td>• 4 studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impacts on child’s negativity with parents, externalizing and aggressive behavior.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• No significant impacts on internalizing behavior or emotional regulation.</td>
</tr>
<tr>
<td><strong>Even Start</strong>, a program focusing on parent literacy, parent involvement, and child school readiness to combat effects of poverty.</td>
<td>✓</td>
<td>✓</td>
<td>• 1 study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impacts on problem behaviors at age 5.</td>
</tr>
<tr>
<td><strong>Family Check-up (early childhood)</strong>, a home-based intervention, designed for mothers with children at risk for future behavior problems, that provides coaching by parent consultants.</td>
<td>✓</td>
<td>✓</td>
<td>• 1 study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impact on child’s destructive behaviors.</td>
</tr>
<tr>
<td><strong>Family Foundations</strong>, a hospital-based childbirth education program for first-time adult expectant parents, that focuses on improving parental adjustment, co-parenting, and child behavior problems.</td>
<td>+</td>
<td>✗</td>
<td>• 2 studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impact on externalizing behaviors, including aggression, for boys, but no significant impacts for girls.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Mixed impacts on internalizing behaviors. Change was positive and significant for boys, but non-significant for girls.</td>
</tr>
<tr>
<td><strong>Family Spirit</strong>, a home visiting parenting and substance abuse prevention program for American Indian teen mothers.</td>
<td>✓</td>
<td>✓</td>
<td>• 1 study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Positive significant impact on externalizing problems and dysregulation.</td>
</tr>
</tbody>
</table>

**Found to Work**: ✓
**Not Found to Work**: ✗
**Mixed Findings**: ±
<table>
<thead>
<tr>
<th>Program</th>
<th>Externalizing</th>
<th>Internalizing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Step to Success</strong>, a program that targets social</td>
<td>![Found to Work]</td>
<td>![Not Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>skills for children who exhibit antisocial behaviors, by</td>
<td></td>
<td></td>
<td>• Positive significant impacts on aggression and other maladaptive behaviors.</td>
</tr>
<tr>
<td>providing teacher training and home visiting.</td>
<td></td>
<td></td>
<td>• Positive significant impact on maladaptive behavior, but non-significant impact on withdrawal.</td>
</tr>
<tr>
<td><strong>Foundations of Learning</strong>, a teacher-training intervention</td>
<td>![Found to Work]</td>
<td>![Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>that educates preschool teachers on classroom management.</td>
<td></td>
<td></td>
<td>• Positive significant impacts on externalizing problems one year after follow up, and on teacher and peer conflict at posttest.</td>
</tr>
<tr>
<td><strong>Fun FRIENDS</strong>, a school-based, universal preventive</td>
<td>![Not Found to Work]</td>
<td>![Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>intervention for reducing early childhood anxiety</td>
<td></td>
<td></td>
<td>• No significant impacts on behavioral difficulties.</td>
</tr>
<tr>
<td>and promoting resilience, delivered by classroom</td>
<td></td>
<td></td>
<td>• Positive significant impact on behavioral inhibition.</td>
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<tr>
<td>teachers.</td>
<td></td>
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</tr>
<tr>
<td><strong>Head Start REDI Program</strong>, a curriculum combining social-</td>
<td>![Mixed Findings]</td>
<td>![Not Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>emotional education and language/literacy skill</td>
<td></td>
<td></td>
<td>• Mixed impacts on aggression, with no impact as rated by parent or observer, but positive significant impact as rated by teacher.</td>
</tr>
<tr>
<td>enhancement for children, and mentoring for teachers.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Head Start</strong>, a nationwide program targeting school</td>
<td>![Not Found to Work]</td>
<td>![Not Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>readiness for low-income families, had mostly non-</td>
<td></td>
<td></td>
<td>• No impact on conflict and aggressive behavior, but positive significant impacts on problem behavior at age 3 for one cohort.</td>
</tr>
<tr>
<td>significant impacts on externalizing behaviors.</td>
<td></td>
<td></td>
<td>• No impacts on withdrawal and social reticence among ages 3-5, but did have positive impacts among the age-6 cohort.</td>
</tr>
<tr>
<td><strong>Home-based Nurse Intervention</strong>, an intervention in</td>
<td>![Found to Work]</td>
<td>![Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>which nurses visit mothers’ homes, providing education</td>
<td></td>
<td></td>
<td>• Delayed impacts on aggression and externalizing behaviors at 30-month follow up.</td>
</tr>
<tr>
<td>and support from child’s birth to age 3.</td>
<td></td>
<td></td>
<td>• Positive significant impacts on withdrawal, anxiety-depression, and internalizing problems.</td>
</tr>
<tr>
<td><strong>Home-Visiting Intervention for Depressed Mothers and their</strong></td>
<td>![Not Found to Work]</td>
<td>![Not Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>infants**, a home visiting program for depressed</td>
<td></td>
<td></td>
<td>• No significant impacts on externalizing behaviors.</td>
</tr>
<tr>
<td>mothers and their infants, where graduate or</td>
<td></td>
<td></td>
<td>• No significant impacts on internalizing behaviors.</td>
</tr>
<tr>
<td>postgraduate students provide coaching on parent-child</td>
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<tr>
<td>interactions through videoed sessions.</td>
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<tr>
<td><strong>I Can Problem Solve</strong>, an intervention focused on</td>
<td>![Found to Work]</td>
<td>![Found to Work]</td>
<td>• 2 studies</td>
</tr>
<tr>
<td>educating children about solving problems and resolving</td>
<td></td>
<td></td>
<td>• Positive significant impacts on adjusted behaviors (reduction in internalizing or externalizing behaviors).</td>
</tr>
<tr>
<td>conflicts.</td>
<td></td>
<td></td>
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<tr>
<td><strong>Interpersonal Skills Program</strong>, an in-school child training</td>
<td>![Found to Work]</td>
<td>![Found to Work]</td>
<td>• 1 study</td>
</tr>
<tr>
<td>training program focused on interpersonal problem-</td>
<td></td>
<td></td>
<td>• Positive significant impacts on interpersonal problem-solving.</td>
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<tr>
<td>solving skills.</td>
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<tr>
<td>Program</td>
<td>Externalizing</td>
<td>Internalizing</td>
<td>Comments</td>
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<td>---------</td>
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</tr>
</tbody>
</table>
| Kids in Transition to School (KITS), a parent and child group-based program, focused on increasing literacy, social skills, and self-regulation. | ✔️ | | - 1 study  
- Positive significant impacts on oppositional and aggressive behaviors. |
| Learning Language and Loving It, a program designed to promote children’s social, language, and literacy development in early childhood settings. | ✔️ | | - 1 study  
- Positive impacts on externalizing behaviors. |
| Legacy for Children, a group training program for mothers, that focuses on improving parenting self-efficacy and child behavior. | ✔️ | | - 1 study  
- Positive significant impacts on parental concerns about child’s externalizing behaviors. |
| Making Choices and Strong Families, an in-school (for children) and parenting training program, focused on social information processing and emotional regulation. | ✔️ | ✔️ | - 1 study  
- Positive significant impacts on aggressive behavior.  
- Positive significant impact on depressive symptoms. |
| Marvelous Me, a preschool curriculum designed to enhance self-concept through guided activities. | | ✔️ | - 1 study  
- Positive impact on self-concept at follow-up. |
| Multi-method Psycho-Educational Intervention, a parent training and classroom-based intervention to promote healthy adjustment of children entering kindergarten. | | | - 2 studies  
- Findings were non-significant for social problems, aggression, and severity of problems, but were significant for measures of problem behavior and general externalizing (findings mostly non-significant).  
- No significant impacts on withdrawal, anxiety, or internalizing behaviors. |
| Parent Management Training-Oregon Model (PMTO), a parent-training intervention for parents of children who have problems with aggression. | | ✔️ | - 1 study  
- Positive significant findings on child’s deviant behavior. |
| Parent-Child Interaction Therapy (PCIT), a program using family therapy to increase positive relationships for families with a history of abuse. | | | - PCIT for PCIT for PCIT for Oppositional Defiant Disorder (1 study and Follow-up): had positive effects on externalizing behaviors post-intervention, but by 1- and 2-year follow ups, these findings decayed to non-significant.  
- PCIT for Disruptive Behavior (1 study): had positive significant impacts on disruptive behavior, externalizing behavior, and compliance. |
| ParentCorps, a parent-training intervention. | | ✔️ | - 1 study  
- Positive significant findings for externalizing behaviors.  
- Positive significant impact on internalizing behaviors. |
| PATHS Preschool, a preschool-based program designed to improve children’s ability to discuss and understand emotions. | | | - 1 study  
- No significant impacts on externalizing behaviors or aggression.  
- Positive significant impact on attribution and withdrawal, but findings were non-significant for internalizing behaviors and anxiety. |
### What Works for Reducing Problem Behaviors in Early Childhood: LESSONS FROM EXPERIMENTAL EVALUATIONS

<table>
<thead>
<tr>
<th>Program</th>
<th>Externalizing</th>
<th>Internalizing</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Pre-K RECAP, a school-based curriculum for   | ±             | ±             | • 1 study  
• Mixed findings: positive significant impacts were seen for teacher-reported externalizing behaviors, but changes in parent-reported externalizing were not significant.  
• Changes in parent-reported internalizing behaviors were non-significant, but changes in teacher-reported internalizing behaviors were positive and significant. |
| teachers to promote prosocial development,   |               |               |                                                                                                                                             |
| and the adaptation to preschool.             |               |               |                                                                                                                                             |
| Prevention Program for Externalizing Problem | ±             |               | • 1 study  
• Positive significant impacts on externalizing behaviors |
| Behavior (PEP), a group training program for  |               |               |                                                                                                                                             |
| parents and teachers designed to improve     |               |               |                                                                                                                                             |
| child problem behavior and parenting         |               |               |                                                                                                                                             |
| practices.                                   |               |               |                                                                                                                                             |
| Promoting First Relationships, a home-based  | ×             | ×             | • 1 study  
• No significant impact on problem or externalizing behavior.  
• No significant impacts on internalizing problems. |
| program where parents are videotaped and     |               |               |                                                                                                                                             |
| offered feedback on strengthening parent-infant relationships. |               |               |                                                                                                                                             |
| Ready to Learn, a program where teachers     | ±             | ±             | • 1 study  
• Positive significant impacts on attending behavior. |
| include storytelling, modeling, peer        |               |               |                                                                                                                                             |
| reporting, and encouragement into curriculum.|               |               |                                                                                                                                             |
| Telephone-Assisted Behavioral Family         | ±             | ±             | • 1 study  
• Positive significant impacts on externalizing behavior.  
• Positive significant impacts on internalizing behavior|
| Intervention, a home-based intervention that  |               |               |                                                                                                                                             |
| provides a self-help book and access to      |               |               |                                                                                                                                             |
| weekly telephone consultations.              |               |               |                                                                                                                                             |
| Toddlers without Tears, a parenting program  | ×             | ×             | • 1 study  
• No impact on externalizing behaviors.  
• No impact on internalizing behavior. |
| targeting parenting beliefs, expectations,   |               |               |                                                                                                                                             |
| and level of nurturance.                     |               |               |                                                                                                                                             |
| Tools of the Mind, an early childhood        | ±             |               | • 2 studies  
• Positive significant impacts on behavior problems. |
| curriculum that focuses on both cognitive    |               |               |                                                                                                                                             |
| and academic skills.                         |               |               |                                                                                                                                             |
| Trauma-informed cognitive behavioral         | ±             |               | • 1 study  
• Positive impacts for oppositional defiant disorder, but nonsignificant findings for ADHD.  
• Positive impacts on Posttraumatic stress disorder, major depression, and separation anxiety disorder. |
| therapy for posttraumatic stress disorder,   |               |               |                                                                                                                                             |
| a therapeutic technique for treating young   |               |               |                                                                                                                                             |
| children with internalizing problems.        |               |               |                                                                                                                                             |
| Triple P (SBDFI, SBFI, EBFI, and Online), a   | ±             |               | • 7 studies  
• Positive significant impacts on disruptive and problem behaviors |
| parenting education program focused on child |               |               |                                                                                                                                             |
| management.                                 |               |               |                                                                                                                                             |
| Tuning into Kids, a parent training program   | ±             |               | • 1 study  
• Positive significant impacts on children’s externalizing behavior. |
| that aims to teach emotionally responsive     |               |               |                                                                                                                                             |
| parenting through group sessions.            |               |               |                                                                                                                                             |
| UCLA Family Development Project, a home      | ±             |               | • 2 studies  
• Positive significant impacts on noncompliant behaviors. |
| visiting program where social workers        |               |               |                                                                                                                                             |
| educate at-risk pregnant or new mothers.    |               |               |                                                                                                                                             |
### Video-feedback Intervention to Promote Positive Parenting and Sensitive Discipline
- **Program**: A home-visiting program for parents with 1- to 3-year-old children who were identified as being at risk for developing externalizing behavior problems.
- **Comments**:
  - 1 study
  - No significant impacts on overactive, oppositional, or aggressive behaviors.

### You Can’t Say You Can’t Play
- **Program**: A social aggression prevention program that seeks to reduce social exclusion in Kindergarten children.
- **Comments**:
  - 1 study
  - Mixed impacts on externalizing behaviors, including disruptive behavior, compliance, and deviance.

### Incredible Years
- **Program**: Child-only intervention includes Dina Dinosaur Social Skills and Problem-solving curriculum.
  - **Comments**:
    - 2 studies
    - Positive impacts on behavior problems, conduct problems with mother, and conduct problems at school.

- **Program**: Parent-only interventions include IY BASIC and ADVANCE.
  - **Comments**:
    - 9 studies
    - Positive impacts on behavior problems, externalizing, conduct problems, and deviant behaviors

- **Program**: Teacher-only interventions include the IY Teacher Training Program.
  - **Comments**:
    - 1 study
    - Positive impacts on conduct problems at school and home

- **Program**: Incredible Years for Oppositional Defiant Disorder: child-plus-teacher intervention
  - **Comments**:
    - 1 study
    - Positive impacts on conduct problems with mother, conduct problems with father, and conduct problems at school

- **Program**: Incredible Years for Oppositional Defiant Disorder: parent-plus-teacher intervention
  - **Comments**:
    - 1 study
    - Positive impacts on conduct problems with mother, conduct problems with father, and conduct problems at school

- **Program**: Incredible Years for Oppositional Defiant Disorder: child, parent, and teacher intervention
  - **Comments**:
    - 1 study
    - Positive impacts on conduct problems with mother, conduct problems with father, and conduct problems at school

- **Program**: IY child-plus-parent
  - **Comments**:
    - 1 study
    - Positive impacts on behavior problems

- **Program**: Head Start plus IY parent
  - **Comments**:
    - Positive impacts on researcher-observed negative behaviors; no significant impacts on parent-observed negative behaviors

- **Program**: Head Start plus IY child and teacher
  - **Comments**:
    - 1 study
    - Positive impacts on negative behaviors

- **Program**: IY child and parent plus home-visiting
  - **Comments**:
    - 2 studies
    - Positive impacts on externalizing behaviors and aggression; no significant impacts on disruptive behavior
    - No significant impacts on internalizing behaviors
APPENDIX

Intervention types:

“Child-focused”: These interventions have a set curriculum that is taught to children, typically in preschools.

“Trained facilitator”: A staff member without a specialized degree, such as a therapist or teacher

“Teacher training”: In this type of intervention, teachers are trained and/or receive coaching on behavior management and promoting social-emotional skills.

“Home visiting”: Parents and/or children are trained or coached in the home.

“Parent training”: Parents or caregivers are trained in group or individual sessions outside of the home.

“More than one type”: An intervention that includes elements of more than one of the approaches above.

REFERENCES


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