

Non-medicinal interventions for young children with ADHD

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Non-medicinal interventions are highly effective in preventing the behavioral and academic problems associated with Attention Deficit Hyperactivity Disorder (ADHD), according to a five-year study led by researchers at [Lehigh University's](#) College of Education.

The study, titled "Project Achieve" and funded by the National Institute of Mental Health (NIMH), was the largest of its kind focusing on children aged 3 to 5 who have shown significant symptoms of ADHD. It also involved researchers from Lehigh Valley Hospital in Allentown, Pa.

The researchers, led by George DuPaul, professor of school psychology at Lehigh; Lee Kern, professor of special education at Lehigh; and Dr. John Van Brakle, chair of the pediatrics department at Lehigh Valley Hospital, studied 135 preschool students with ADHD symptoms. They evaluated the effectiveness of early intervention techniques in helping children decrease defiant behavior and aggression, while improving academic and social skills.

The study's results are reported in a special series on ADHD in the most recent issue of *School Psychology Review*. Published by the National Association of School Psychologists, the quarterly is the world's second-largest peer-reviewed psychology journal.

"Early identification and intervention are essential, but there has been a lack of research on how to identify and intervene effectively with these children during their preschool years," said Thomas Power, editor of the journal and program director with the Center for Management of ADHD at The Children's Hospital of Philadelphia.

"The investigation by Kern, DuPaul and their colleagues is the most ambitious study ever conducted of non-pharmacological, psychosocial interventions for young children with ADHD."

The results were significant. Using a variety of early intervention strategies, parents reported, on average, a 17-percent decrease in aggression and a 21-percent improvement in their children's social skills. Teachers saw similarly strong results; in the classroom, there was a 28-percent improvement in both categories. Early literacy skills improved up to three times over their baseline status.

"Medication may address the symptoms of ADHD," says DuPaul, "but it does not necessarily improve children's academic and social skills. And because this is a lifelong disorder, without any cure, it's important that we start understanding what tools and strategies are effective for children with ADHD at such an early age.

"There's simply a lack of understanding about the type of non-medicinal services that are available to preschool children and their families. Our goal is to address behavioral and academic issues before they become more problematic in elementary school."

Early intervention techniques include highly individualized programs that often rely on positive supports to reinforce behavior. For example, in consultation with parents and preschool teachers, Project Achieve researchers modified the environments in home and school (such as altering tasks and activities in the classroom to accommodate for ADHD students) in an effort to improve behavior. The highly interactive techniques were presented as alternatives to medicine.

ADHD is a lifelong mental disorder that may become apparent in a child's formative preschool years. The disorder, which makes it difficult for children to control their behavior and pay attention, affects about 7 percent of the school-aged population. The disorder has become a public health concern, however, because 40 percent of children who show signs of ADHD are suspended from preschool, while approximately 16 percent are eventually expelled.

The researchers suggest that a multi-tiered approach to intervention, offering more traditional services to at-risk children and more intensive services to children in greatest need, may be the most practical and cost-effective strategy for helping preschoolers overcome behavioral and academic challenges.

"While parents of children with ADHD usually trace the characteristic behaviors back to the preschool years," says Van Brakle, "pediatricians have long questioned whether such children can accurately be identified, given the overlap with normal behaviors in young children. And if so, whether any intervention that does not involve medicine can be of value. Project Achieve suggests that with careful assessment, such children can be accurately identified and that appropriate behavioral interventions are an important part of the treatment plan."

School Psychology Review's special ADHD issue features two ADHD articles co-authored by researchers at Lehigh's College of Education. DuPaul also contributed the Forward for the issue, which is titled, 'School-Based Interventions for Students With Attention Deficit Hyperactivity Disorder: Current Status and Future Directions.'

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