



A Child's Place

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## Occupational Therapy • Speech Therapy

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# Language Impairments Contribute to Attention Deficits



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Founder / Director

There is a well-established and strong association between language impairment and a host of childhood behavioral problems including hyperactivity, inattentiveness, attention deficit hyperactivity disorder (ADHD), delinquency, and externalizing. It has been suggested that language impairments may have a causal relationship with these behavioral problems in children, but there has been limited research attempting to demonstrate that causal link. Identifying and understanding such a causal link could be of great benefit to children, parents, and society, because language impairment can be improved through speech and language pathology services, especially when those services are early and intensive. Recently, researchers out of Duke and other universities published strong evidence that language impairments do, in fact, contribute to or cause many of these behavioral problems.<sup>1</sup>

Isaac Petersen and colleagues conducted a longitudinal study following 12,000 school children from ages four to thirteen. Parents and teachers rated the children's inattentive-hyperactivity and externalizing behavior. Using statistical modeling, they were able to assess the extent to which known variables predicted future behavior problems (language ability, past behavior problems, male or female, socioeconomic status, ethnicity, math skills, reading comprehension, short-term memory, etc.) Language ability predicts future behavior problems more strongly than any other variable. Furthermore, language ability predicts behavior problems more strongly than behavior problems predict language challenges. This gives evidence to the hypothesis that language problems do indeed have a strong causal relationship with behavioral challenges. The authors state, "The findings suggest that language ability may be a useful target for the prevention or even treatment of attention deficits and externalization problems in children."<sup>2</sup>



The exact mechanism by which language challenges might cause behavior problems may be three-fold: behavioral, biological, and social. The behavior of private (self-directed) speech is associated with enhanced performance on problem-solving tasks and self-regulation. Interventions designed to increase the use of private speech result in improved behavioral regulation.<sup>2-4</sup> The biological source of the connection may stem from the fact that language processes are associated with neural circuits in the frontal lobe involving aspects of self-regulation.<sup>5</sup> Moreover, intervention targeting language ability has been shown to improve certain neural deficits in selective attention.<sup>6</sup> Finally, language deficits may influence the development of behavior problems as a consequence of social rejection.<sup>7</sup>

The option of using speech and language pathology to prevent or treat behavioral problems has exciting promise. Snowling et al. demonstrated that when language delay is resolved by 5.5 years, children have particularly good psychosocial outcomes in adolescence.<sup>8</sup> The progress achieved through speech/language therapy often has a self-maintaining nature, suggesting that children can go on to lead healthier, happier lives without a need for long-term, constant healthcare intervention. When you see children experiencing problems with inattentiveness, hyperactivity, or externalization, please tell parents about the potential of a thorough assessment at Emerge - A Child's Place.

Please tell parents about Emerge - A Child's Place  
Believing in a Child's Potential to Flourish

References:

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