

Thesis Title	Effect of Language Therapy with Essential Oil Inhalation Program on Language Skills, Attention and Behavior in Children with Attention Deficit Hyperactive Disorders
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ABSTRACT

Attention deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder characterized by inattention, hyperactivity, and impulsivity, which can interfere with learning, communication, and daily functioning. Children with ADHD often present with speech and language difficulties; however, attentional deficits and behavioral dysregulation may limit engagement and reduce the effectiveness of language training. This study aimed to examine the effectiveness of a language training program combined with essential oil inhalation on language skills, attention, and behavior in children with ADHD. A mixed-methods design was employed, consisting of a quasi-experimental phase to examine immediate effects during training and a four-week randomized controlled trial. Twenty children aged 6–13 years with mild to moderate ADHD were randomly assigned to either an experimental group receiving language training with vetiver essential oil inhalation or a control group receiving language training with a water-only diffuser. Both groups participated in structured language training sessions for 30 minutes, twice weekly for four weeks. Language outcomes were assessed using the Thai articulation test and the Utah Test of Language Development (UTAH), attention was measured through video-based observation of attention time during tasks, and behavior was evaluated using the SNAP-IV scale. The results demonstrated that both groups showed significant improvements in language outcomes after four weeks; however, the experimental group

exhibited significantly greater improvements in articulation and language scores. Attention time increased significantly only in the experimental group, while no significant change was observed in the control group. Additionally, SNAP-IV scores in the experimental group decreased significantly, indicating improvements in inattention, hyperactivity, and oppositional behaviors. In conclusion, language training improved language abilities in children with ADHD, and the addition of essential oil inhalation further enhanced outcomes by increasing attention and improving behavioral regulation during training, suggesting that olfactory stimulation may serve as a complementary approach to optimize language therapy effectiveness in this population.

Keywords: ADHD, Attention Deficit Hyperactivity Disorder, Vetiver Essential Oil, Aromatherapy, Pediatric Intervention, Complementary Therapy, Language Therapy

