ABA Therapy: an evidence-based treatment for children with autism

CHARACTERISTICS OF THE LOVAAS MODEL OF APPLIED BEHAVIOR ANALYSIS

1) **therapy in the home**  
a young child’s primary place for learning

2) **extensive research**  
most extensive and rigorously controlled early intervention research for children with autism published to date

3) **parent involvement**  
collaborating with parents in what to teach, empowering parents in how to teach

4) **behavioral**  
based on principles and strategies from the science of applied behavior analysis

5) **intensive**  
with 35-40 hours per week of therapy and informal teaching throughout a child’s waking hours based on comparisons of treatment outcome

6) **comprehensive**  
encompassing skills across all developmental domains, from communication, speech, and language, to self-help, academics, and play

7) **peer play and school**  
integral components of therapy

8) **competent therapists**  
receive ongoing training, are evaluated via performance-based objectives, and supervised by consultants with over ten years experience

9) **worldwide collaboration**  
with the multi-site replication research that is continuing throughout the world

Treatment begins in closely supervised and controlled environments to guarantee success. Positive interactions are first developed through the use of favorite activities and responding to any attempts to communicate or request. Motivation is encouraged through the use of familiar materials. Success is promoted through reinforcement of successive approximations, prompting and fading procedures, and the use of positive reinforcers that are child-specific and functional (i.e., serve the intent of increasing behavior). Examples of such reinforcers are small bites of food, playing with a favorite toy, looking at a favorite book, and social rewards such as verbal praise, tickles, hugs, and “rides through the air.” As intervention progresses, reinforcement is expanded, whenever possible, to include more natural and social reinforcers.

Between brief learning periods (often initially as short as 30 seconds), children and staff members play together so that therapy is more like play than work, to help generalize skills into more natural settings, and to continue to build social responsiveness. The intervention is structured so that appropriate behaviors are maximized through prompting and positive reinforcement. Inappropriate behaviors are reduced by teaching alternate, more socially acceptable forms of communicating the same needs.

Receptive language is often taught before expressive language. Requesting is developed as early as possible through the use of gestures, signing, pictures, or spoken language. Imitation, both verbal and nonverbal, is also a crucial part of treatment. As treatment progresses, more complex skills are taught, social and conversation skills are developed, and academic skills (including “survival skills” such as responding to group instructions) are practiced. Social interactions and cooperative play are integral to treatment. Facilitated play occurs first with siblings and then with peers during play dates and at school.

While intervention often begins within the home, a young child’s primary place for learning, it is generalized in a child’s neighborhood, including public schools, play areas, stores, restaurants, and other places which facilitate the child’s integration among typically developing children. A trained 1:1 aide facilitates this transition and is faded when possible.

-paraphrase of Lovaas, 1987; Sallows, 2005; & Cohen, 2006
PERTINENT RESEARCH

Research on the Lovaas Model of Applied Behavior Analysis has been identified as the most extensive and rigorously controlled early intervention literature published to date for children with autism.


Original research in peer-reviewed journals indicating that 47% of children achieved normal-range IQ scores and attended a regular education first grade classroom after behavioral treatment utilizing the Lovaas Model of Applied Behavior Analysis. 10% of children made few gains. The study included a control group.


Follow-up research in early adolescence showed that children in the 1987 study maintained their skills and could succeed in life without costly special education and residential services.


Only randomized controlled trial of early intensive behavioral treatment. Intensive group, utilizing the Lovaas Model of Applied Behavior Analysis (but only 30 hours per week), showed significant difference in IQ, language development, and academic skills compared to the control. No significant difference in Vineland scores or tests of behavior problems. IQ gain (16 pts) and students placed in regular education classes (27%) half of 1987 study.


Acknowledges the efficacy of applied behavioral methods in the treatment of children with autism and cites the “well-designed study...carried out by Lovaas and colleagues”


http://www.nap.edu/openbook.php?isbn=0309072697

Identifies the Lovaas Model of Applied Behavior Analysis as one of the “state-of-the-art” programs for children with autism


Demonstrates that a focused behavioral treatment program is far superior than an eclectic special education approach that uses a variety of treatments. (Children in both groups received the same number of hours of treatment by qualified personnel.)


Replication study of the Lovaas Model of Applied Behavior Analysis by an independent author. Dr. Sallows states, “We found that 48% of all children showed rapid learning, achieved average posttreatment scores, and at age 7, were succeeding in regular education classrooms. These results are consistent with those reported by Lovaas and colleagues (Lovaas, 1987; McEachin, Smith, & Lovaas, 1993).”


Another replication study of the Lovaas Model of Applied Behavior Analysis by an independent author. Children in behavioral treatment scored significantly higher in IQ and adaptive behavior scores than the comparison group. Further, 29% (6 of 21) children were fully included in regular education without assistance and another 52% (11 of 21) were included with support. This compares to only 5% (1 of 21) children in the control group who were placed in regular education.


Review of early intervention research by independent authors. Lovaas’ treatment was the only early intervention for children with autism that met criteria as a “well-established” treatment.