

Research Supporting ABA

2010 review of early intervention research

Using Participant Data to Extend the Evidence Base for Intensive Behavioral Intervention for Children with Autism

Eldevik, S. et al (2010). American Journal on Intellectual and Developmental Disabilities, 115, 381-405.

More children who underwent behavioral intervention achieved reliable change in IQ (29.5%) and adaptive behavior (20.6%) than for the comparison (2.6% & 5.7%) and control groups (8.7% & 5.1%). Within the behavioral intervention sample, IQ and adaptive behavior at intake predicted gains in adaptive behavior. Intensity of intervention predicted gains in both IQ and adaptive behavior.

2008 review of early intervention research

Early behavioral intervention, brain plasticity, and the prevention of autism spectrum disorder

Dawson, G. (2008). Developmental and Psychopathology, 20, 775-803.

A proposal that early detection of ASD can prevent the full onset of the syndrome by implementation of interventions and treatments designed to alter the course of early behavioral development and subsequently brain development.

2008 review of research supporting recovery

Can Children with Autism Recover? Is So, How?

Helt, M., Kelley, E., Kinsbourne, M., Pandey, J., Boorstein, H., Herbert, M., & Fein, D. (2008). Neuropsychology Review, 18 (4), 339-366.

A review of existing research demonstrates that between 3% and 25% of children lose their ASD diagnosis following treatment. Behavioral techniques are most often associated with "best outcomes" and the most empirically validated approach. Possible mechanisms of recovery include: normalizing input by forcing attention outward or enriching the environment; promoting the reinforcement value of social stimuli; preventing interfering behaviors; mass practice of weak skills; reducing stress and stabilizing arousal.

2007 study comparing Eclectic-Developmental Approach and ABA Intervention Change in autism core symptoms with intervention

Zachor, D. Ben-Itzhak, E. Rabinovich, A. and Lahat, E. (2007) Research in Autism Spectrum Disorders, (1), 304-317.

Comparison of an Eclectic approach (Mix of Speech Therapy, Occupational Therapy, Special Education Small Group Instruction, Structured cognitive teaching) group (19) compared to ABA group (20) receiving 1:1 ABA, both took place in a preschool setting including typical peer models. Groups were matched on IQ, age, Symptoms Assessments both programs received the same amount of money and children received the same number of hours of service (full day program). After one year ABA group improved in IQ, Language and Communication, reduction in symptoms, changes in diagnostic category (20% of ABA group off-spectrum none in the Eclectic group). Children with higher IQ were better before and after treatment however, higher IQ children do not improve more than lower IQ children. IQ correlates with higher receptive skills but not with reduction in symptoms. Children receiving ABA, regardless of IQ, show significant improvement over the Eclectic group.

2006 study comparing intensity of therapy

Effects of low-intensity behavioral treatment for children with autism and mental retardation

Eldevik, S., Eikeseth, S., Jahr, E. & Smith, T. (2006). *Journal of Autism and Developmental Disorders*, 36 (2), 211-224.

A comparison of 2 groups of children receiving either behavioral treatment or eclectic treatment for an average of *12 hours per week* was completed. After 2 years of treatment, the behavioral group made larger gains than the eclectic group. However, *gains were more modest than those reported in previous studies with children receiving more intensive behavioral treatment and it is questionable whether they were clinically significant.*

2006 study replicating the 1987 Lovaas study results

Early Intensive Behavioral Treatment: Replication of the UCLA Model in a Community Setting.

Cohen, Howard, Amerine-Dickens, Mila, Smith, Tristram. (2006). *Journal of Developmental & Behavioral Pediatrics*, 27 (2), 145-155.

The most recent 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.

2005 study replicating the 1987 Lovaas study results

Intensive Behavioral Treatment for Children with Autism: Four-Year Outcome and Predictors.

Sallows, Glen O. & Graupner, Tamlynn D. (2005). *American Journal on Mental Retardation*, 110 (6), 417-438.

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)."

2005 independent replication study directly comparing three treatments

A Comparison of Intensive Behavior Analytic and Eclectic Treatments for Young Children with Autism.

Howard, Jane S. , Sparkman, Coleen R., Cohen, Howard G., Green, Gina, & Stanislaw, Harold. (2005).

Research in Developmental Disabilities, 26 (4), 359-383.

The study compared the effects of three treatment approaches on preschool-age children with autism. The experimental group received 25-40 hours per week of 1:1 ABA intervention. A comparison group received 30 hours of "eclectic" interventions in special education programs designed for children with autism. A second comparison group received 15 hours per week of combination of generic educational services involving small group and developmental preschool instruction.

Results from an independent research group that replicate the findings of Eikeseth et al. (2002). As summarized in the journal abstract, "intensive behavioral treatment is considerably more efficacious than 'eclectic' intervention."

**2002 study directly comparing two treatments
Intensive Behavioral Treatment at School for 4- to 7-Year-Old Children with Autism.**

Eikeseth, Svein, Smith, Tristram, & Eldevik, Erik Jahr Sigmund. (2002). Behavior Modification, 26, 49-68.

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.)

1997 follow up study

Intensive behavioral treatment for preschoolers with severe mental retardation and pervasive developmental disorder.

Smith, T., Eikeseth, S., Klevstrand, M. & Lovaas, O. I. (1993). American Journal on Mental Retardation, 102 (3), 238-249.

Children in the experimental group received 30 hours of 1:1 ABA therapy per week. The comparison group received 10 hours or less of the same therapy per week. The experimental group obtained clinically meaningful gains relative to the comparison group, who remained quite delayed.

1993 follow up study

Long-term outcome for children with autism who received early intensive behavioral treatment.

McEachin, J. J., Smith, T., & Lovaas, O. I. (1993). American Journal on Mental Retardation, 97 (4), 359-372.

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.

1987 study pioneering study

Behavioral treatment and normal educational and intellectual functioning in young autistic children.

Lovaas, O. I. (1987). Journal of Consulting and Clinical Psychology, 55, 3-9.

Original research in peer-reviewed journals indicating that 90% of children substantially improved when utilizing the Lovaas Model of Applied Behavior Analysis, compared to the control group. Close to half attained a normal IQ and tested within the normal range on adaptive and social skills.