

## Early Childhood Programs

### Review 4

Howlin, P., Magiati, I., & Charman, T. (2009). Systematic review of early intensive behavioral interventions for children with autism. *American Journal on Intellectual and Developmental Disabilities, 114*, 23–41. PubMed Abstract available at <http://www.ncbi.nlm.nih.gov/pubmed/19143460>.

<b>Objectives</b>	Examine the findings from controlled early intensive behavioral intervention (EIBI) studies for young children with autism.
<b>Studies Included</b>	Eleven U.S. and international studies from 1987 to 2007
<b>Participants in the Studies</b>	Children diagnosed with autism, autism spectrum disorder, or pervasive developmental disorder, with the age at start of treatment less than 6 years
<b>Settings</b>	Some of the reported settings were school, community, and home.
<b>Outcomes</b>	Intelligence quotient (IQ), Vineland Adaptive Behavior Scale (VABS) scores
<b>Limitations of the Studies</b>	The tests used varied from study to study and from baseline to follow-up in the same studies, which can result in questionable conclusions about improvement; studies did not include data on age equivalents, standard scores, and raw scores, so interpretation is difficult; most studies did not provide data on the quality of the alternative therapies offered or whether they were autism-specific; details of the interventions were not given; it was difficult to establish how many hours of intervention children received and whether baseline measures were conducted prior to or at the time of the child's enrollment or after the program had started; sample sizes were small; most studies were not randomized; there was inadequate information of characteristics of participants, therapy, and limitations of outcome measures; most studies were conducted by independent program evaluators, making positive effects questionable; there was a wide range of intervention hours in both the intervention and control groups.

### Results

The effect of EIBIs on children with autism, autism spectrum disorder, or pervasive developmental disorder was compared to control groups. The mean length of time between baseline assessment and follow-up was 39.2 months for children in the EIBI group and 34.5 months for children in the control group. Overall, EIBI can be very effective for some children with autism spectrum disorders; however, there is wide variability in children's response to treatment. Specifically, compared to control groups, EIBI resulted in improved IQ and VABS scores, but children's IQ and initial language level seem to be related to children's outcomes. There are

indications that the first year of participation produces the most substantial gains, at least in IQ, with the impact of EIBIs diminishing over time. Length of intervention and chronological age were not related to children's outcomes.