

Early intensive behavioural intervention using the principles of Applied Behavioural Analysis (ABA).

An effective treatment for Autism Spectrum Disorder?

Navigating the many advertised treatments for children with autism spectrum disorder (ASD) can be difficult for families wishing to provide the best intervention for their child.

Though a variety of interventions are marketed, there are extreme variations across the evidence base supporting the use of different treatments for this population.

At present Early Intensive Behavioural Intervention (EIBI), based in Applied Behaviour Analysis (ABA) techniques, remains the intervention with the greatest documented evidence for its ability to improve outcomes for children with ASD.

A recent review by Reichow (2011) found that four large meta-analyses concluded that these interventions have a positive effect compared to control conditions.

A growing number of authors have also concluded that there is an evidence base sufficient to support its use (Eldevik et al., 2009; Howlin, Magiati, & Charman, 2009; Peters-Scheffer, Didden, Korzilius, & Sturmey, 2011; Rogers & Vismara, 2008).

While other types of intervention may be of use for individuals with ASD, they have insufficient evidence to draw sound conclusions at this stage.

The benefits of EIBI based in ABA are widely documented for children with ASD and cover a number of areas of functioning. A variety of goals related to child development may be targeted with ABA.

For example, evidence has shown that ABA based interventions are able to decrease symptom severity and increase IQ, learning rate, language skills, visual-spatial skills, social skills and adaptive behaviour (Cohen, Amerine-Dickens, & Smith, 2006; Eldevik, et al., 2009; Howard, Sparkman, Cohen, Green, & Stanislaw, 2005; Reichow & Wolery, 2009; Remington et al., 2007; Smith, Groen, & Wynn, 2000) compared to other treatments or no treatment.

Schooling outcomes (academic and social) are also improved when ABA based interventions are commenced prior to starting school (e.g. Smith, et al., 2000), providing strong evidence that this intervention will contribute to immediate and future social participation and later economic contributions.

Factors influencing outcomes of ABA based interventions

Though ABA based interventions are currently recognised as the gold-standard for autism intervention (Rogers & Vismara, 2008), the extent to which the treatment is successful does vary across individuals.

A recent review summarised the factors associated with efficacious treatment for young children who are at risk of, or have, autism (Wallace & Rogers, 2010):

1. Individualised approach to the program (considering the child's needs and development)
2. Hours and length of intervention (short, infrequent treatments were considered less effective)
3. Parental involvement in the delivery of the intervention
4. Supervision of implementation of the program to ensure fidelity

Inclusive Directions has a number of packages available for children with autism, and each addresses the core components listed above.

Each child is allocated an experienced case manager who provides initial consultation to structure the program specifically for the child's needs and developmental level.

The case manager then continues to provide supervision of the implementation of the program and is able to assist families, and those working with the families in progressing through programs and challenging areas.

The packages available at Inclusive Directions are varied as we recognise that each family's needs are different.

However, as the evidence suggests that the frequency with which intervention is delivered plays a role in its efficacy, we do recommend that the child does as many hours as possible.

Parental involvement with the program is sometimes able to increase the hours of intervention provided to the child but, regardless of whether parents act as therapists or not, their involvement in the program is vital.

Parental understanding of how the program works and its basic principles allow for a consistent approach to be present across the child's day, and ensures that the child progresses as best he or she is able.



Factors such as age at intake (Harris & Handleman, 2000) have also been shown to impact the outcome of intervention.

Inclusive Directions therefore recommends that treatment start as soon as ASD is suspected, to improve developmental trajectory.

Promisingly, due to increased brain plasticity in infants and early childhood, it has been suggested that commencing the intervention as soon as possible may influence the physiology underlying the core deficits associated with autism (Dawson, 2008) and recent work confirms that early behavioural intervention is associated with normalisation of brain activity in children with ASD (Dawson et al., 2012).



Structured Program for Early Childhood Therapists working with children with Autism (SPECTRA)

Inclusive Directions follows the Structured Program for Early Childhood Therapists working with children with Autism (SPECTRA; Young, Partington & Goren, 2009) which directly targets the core deficits areas of ASD that are often delayed or absent in the child.

In line with evidence regarding improving outcomes (Wallace & Rogers, 2010), it is recommended that SPECTRA be implemented at least 15 hours per week, though recommendations for optimal number of hours are generally around 30 hours per week (Reed, Osborne, & Corness, 2007; Smith, et al., 2000).

The efficacy with which SPECTRA can improve outcomes for young children with ASD has been studied over the past 12 years at the Flinders Early Intervention Research Program.

Results demonstrate positive outcomes for many of the children involved, in addition to a significant reduction in parental stress following commencement of the program.

Results are currently being disseminated for publication following the cessation of the research study.

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