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## **Young Children With Autism Spectrum Disorders - Importance Of Early Developmental And Behavioural Interventions**

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### **Abstract:**

Children with autism spectrum disorders have impairment in reciprocal social interaction and impairment in communication skills. They also have repetitive behaviours and preoccupation with stereotyped patterns of behaviours. The most important therapy is early individualized intensive behavioural intervention. Intensive behavioural interventions should be provided to all young children at the onset of symptoms. If not, they will have lifelong difficulties in communication and social interaction. Parent mediated behavioural interventions are effective in the management of young children with autism spectrum disorders. Children with autistic symptoms who receive earlier referrals to specialists and obtain intensive behavioural intervention achieve optimal outcomes.

**Keywords:** autism spectrum disorders, young children, early behavioural interventions

### **Introduction**

Autism spectrum disorders include Autistic Disorder, Asperger's Disorder and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS). Autism spectrum disorders are characterized by impairment of social and communication abilities as well as repetitive, stereotyped patterns of behaviour that range from very mild to severe [1]. The onset of symptoms is usually before three years of age. Prevalence of autism spectrum disorders is increasing every year. The proportion of children with autistic symptoms increased 2.04-fold from 1998 to 2012 [2]. Early individualized intensive behavioural intervention is the well-established treatment for young children with autism spectrum disorders [3]. If not intervened at the earliest, these individuals will have lifelong difficulties in communication skills. Hence parents should be guided to develop strategies for management of these problems at the earliest. Parent mediated behavioural interventions are effective in improving parent child interaction and language comprehension of these children [4]. Early interventions for autism spectrum disorders represent the merging of applied behavioural and developmental sciences [5].

## Clinical features of Autism Spectrum Disorders

The onset of symptoms is usually gradual. One of the early warning signs is reduced social interactions in infancy. These children fail to initiate eye contact. Many children with autism spectrum disorders begin to speak by one year of age and then lose their language skills before 2 years of age. The child may refuse to make eye contact and stop responding to social cues. Vision and hearing tests will be normal. Classical clinical features are the following:

1. Impairment in reciprocal social interactions: lack of eye contact, joint attention, and empathy [6-8]. These interactions are essential for everyday social functioning, and include initiating, maintaining and terminating conversation, demonstrating interest and paying attention to social cues. These children have significant difficulties in sensing the feelings or reactions of others.
2. Impairment in communication: In Autistic Disorder, there is delay in, or total lack of, language development. Even if some language skills develop, they fail to initiate or sustain conversations. But in Asperger's Disorder, there is no significant delay in the acquisition of language, though the individual lacks subtleties of language such as: the jokes, humour and melodies of language, as well as interpretation of facial expressions and body language [6-8]. Clinical presentation in PDD-NOS is variable.
3. Repetitive or restricted behaviours and special interests, often consisting of motor mannerisms like hand or finger flapping, toe walking and preoccupation with stereotyped patterns of behaviours [6-8]. This will exacerbate the communication difficulties. The child focuses on narrow or restricted interests and hence loses perspective of the world around. Autistic savants are those who can master extraordinary skills in maths, spelling, drawing or music.

Diagnosis is made if behaviours are not better accounted for by mental retardation, Rett's Disorder or Childhood Disintegrative Disorder [6]. Autism may be diagnosed co-morbidly with other behavioural or developmental disorders.

## Treatment Objectives

The major challenges for effective learning in children with Autism Spectrum Disorders are difficulties in social interaction and communication [9]. There are also problems in joint attention and selective attention which are very important for successful learning. Lack of social interaction leads to numerous problem behaviours which cause further challenges for effective learning. Hence the goals for management of children with autism spectrum disorder are to minimize the problem behaviours of autism which negatively impact learning and stimulate normative developmental processes [9]. The treatment goals are set based on the strengths and weaknesses of the individual child. The behavioural and developmental intervention programs for autism spectrum disorders must be guided by individual needs [10].

## Importance of Early Behavioural Interventions

Very early intensive behavioural and developmental interventions for young children with autistic symptoms will enhance developmental outcomes [11]. The mainstay of therapy and the well-established treatment for autism spectrum disorders is early individualized intensive behavioural intervention [3]. Children treated early develop the skills to communicate, recognize and respond to social interactions and can curb repetitive self-stimulatory behaviours. Intensive behavioural intervention programs will also prevent aggressive behaviours that occur commonly in children with autism spectrum disorders. Children with autism spectrum disorders, who receive early intensive interventions make major developmental gains in the elementary school years [12].

Overview of 5 meta-analyses of early intensive behavioural intervention (EIBI) for young children with autism spectrum disorders published in 2009 and 2010 showed that EIBI is an effective intervention strategy for many children [3,13].

EIBI leads to positive effects in intellectual functioning, language skills and adaptive behaviours of young children with autistic symptoms. EIBI programs that include parents in treatment are more effective. Child characteristics impact program effectiveness. Hence individualized treatment is very important [14].

Early and sustained intensive well-structured behavioural interventions based on principles of applied behaviour analysis is the most effective treatment [15]. Children receiving applied behaviour analysis therapy have good outcomes [16]. In addition to development of basic language skills such as vocabulary, focus of attention should be given to improve social and functional communication [17]. Scientific teaching of social skills with extrinsic reinforcement is necessary, as children with autism spectrum disorders cannot acquire these skills through observation alone [18]. For addressing maladaptive behaviours in home environment, specific interventions addressing the problem behaviours should be provided. [19]. Emphasis is also given to counselling and problem-focused therapies from cognitive-behavioural perspectives [20].

Early psycho educational intervention that include behavioural elements, has proved to be capable of modifying the course of children with autism spectrum disorders and is currently the only and most suitable approach that have proved to be effective in research studies [21].

### *Parent mediated early interventions*

Practice and research have demonstrated the importance and efficacy of parent-delivered early interventions for children with developmental delay [22]. There is scientific evidence for the effectiveness of parent-mediated interventions in improving reciprocal social interaction and communication skills. Hence importance should be given to early behavioural interventions that enable parents to contribute skilfully in the management of their child with autism spectrum disorder [4]. Parent-mediated intervention improves the developmental outcomes for infants at risk of autism spectrum disorders [23].

Parental sensitivity and responsivity to children's cues have been found to predict language outcomes in autistic children, as in normal children [24-26]. Studies on mother-toddler interactions have shown that maternal sensitivity at 18 months predicted expressive language development from age 2 to 3 years in children with emergent autism spectrum disorders [27]. The quality and quantity of parent-child interactions will predict the effectiveness of parent-delivered toddler interventions.

The inclusion of parents and other family members has been identified as the most important component of effective early intervention programs [9]. Several studies have demonstrated the positive effects of parent-delivered interventions in reducing behaviour problems, improving communication skills and increasing the play and imitation skills [28-34]. Parent-implemented early intervention leads to better maintenance of skills than direct clinic treatment [35].

### *Early Start Denver Model*

The Early Start Denver Model is a comprehensive behavioural early intervention program for children aged 12 to 48 months with early symptoms of autism. This relationship-based intervention involves approaches validated by the science of child development and the science of applied behaviour analysis [36, 37]. The program includes a developmental curriculum defining the skills to be taught and a set of procedures used to deliver the content. It involves a child-centred interaction using the parents that embeds many teaching opportunities into play activities.

Dawson D et al conducted randomized controlled trial to evaluate the efficacy of the Early Start Denver Model, a comprehensive developmental behavioural intervention, for improving the skills of

toddlers between 18 and 30 months of age with autism spectrum disorder. Children who received Early Start Denver Model showed significant improvements in intelligence and adaptive behaviour. These children also maintained the rate of growth in adaptive behaviour compared with a normative sample of typically developing children. This randomized controlled trial demonstrated the efficacy of a comprehensive developmental behavioural intervention for toddlers with autism spectrum disorders, for improving cognitive and adaptive behaviour. This study gives significant evidence for the importance of early detection of and intervention in autism [38].

Parent-delivered intervention of the Early Start Denver model were given for toddlers at risk for autism spectrum disorders aged 14 to 24 months. Assessments were done at baseline and 12 weeks later. Younger age of the child at the start of intervention and greater number of intervention hours were positively related to the amount of improvement in the behaviour of the children with autism spectrum disorders [36]. Joint attention interventions demonstrate positive outcomes in preschool-age children [40].

### *Very early interventions in infancy*

Recent prospective studies of infants identified impairments in four key developmental domains that are predictive of autism spectrum disorders. These domains are early attentional control, emotion regulation, social orienting/approach, and communication development. By targeting the earliest manifestations of atypical development in infants we can improve the skills before the developmental cascade that leads to autism spectrum disorders is fully manifested [41].

The current recommendation is to assess one year olds whose parents are concerned about autism, so that the youngest children can immediately receive very early interventions. There is no "wait and see" approach in management of autism spectrum disorders, we should always "act fast" [36].

### **Conclusion**

Young children with autism spectrum disorders have significant impairment in social skills and communication skills. They often display repetitive as well as non-compliant behaviour. This early pattern of difficulties is a real challenge for the parents. Hence therapies that guide parents to develop strategies for interaction and management of the behaviour problems are very important in early intervention of children with autism spectrum disorders. Parent-mediated early behavioural interventions are effective in improving the communication skills and reciprocal social interaction of these children. Comprehensive developmental and behavioural interventions are necessary for toddlers with autism spectrum disorders for improving cognitive skills and adaptive behaviour. Many studies give strong evidence for beginning early intervention as soon as possible, and highlight the importance of identifying young children at risk for autism spectrum disorders as early as possible. More intensive interventions lead to greater developmental gains. Professionals in child guidance can help families to maximize intervention hours by teaching them to provide high quality learning opportunities at home as soon as the autistic symptoms appear.

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