

Social Impairment in Children with Autism Spectrum Disorder

This article is the fourth in a series by the Canadian Council on Learning (CCL) on issues related to disabilities and to the themes of its five knowledge centres: Aboriginal Learning; Adult Learning; Early Childhood Learning; Health and Learning; and Work and Learning. The goal of this series is to raise awareness of the particular learning challenges facing Canadians with disabilities and identify practices that enhance their opportunities to learn.

CCL's Early Childhood Learning Knowledge Centre (ECLKC) is composed of a consortium of organizations led by the Centre of Excellence for Early Childhood Development at the Université de Montréal. The ECLKC has a national advisory committee that includes representatives from a variety of public, professional and academic organizations across Canada.

bal communication, ranging from the absence of any desire to communicate, to advanced speech associated with a limited ability to have a normal, interactive conversation.

Numbers Increasing?

Certain lay groups and the popular media have long claimed the number of children with ASD or autism has increased over time, but there is little evidence to support this. Rather, a change in the diagnostic category from the limited description of autism to the more inclusive ASD has resulted in an increased number of children who meet the criteria. In addition, improved public awareness of autism has increased both our ability to recognize its symptoms and the likelihood that children with these symptoms will be identified. According to results from the Special Needs and Autism Project, ASD affects approximately one in every 100 individuals.

Social Impairment and ASD

The degree of social impairment for those with ASD varies considerably from individual to individual. The primary social impairments associated with ASD include difficulty interacting with peers, problems using and interpreting nonverbal communication skills, and limited imitation of other people's actions, movements and sounds.

Children with ASD often have difficulty making friends and may not appear interested in doing so. They seem to lack the intuition needed to recognize and understand how others are feeling or reacting, and they may not appear to react to others' feelings and actions. For example, a child with ASD may have difficulty playing a game or sharing a toy with another child. They also use few gestures when communicating and exhibit fewer facial expressions than average.

HUMAN BEINGS ARE by nature social animals. As a result, disabilities that impede the capacity to socialize with others can be devastating, to the person affected by them and others around them.

Children with autism spectrum disorder (ASD) face many challenges in their lives, but their difficulties with interacting socially with others are often most significant. Researchers have tried to get a better understanding of the social difficulties experienced by individuals with ASD and what can be done to help.

What is Autism Spectrum Disorder?

Autism spectrum disorder refers to three distinct but related conditions associated with atypical patterns of development: autistic disorder (or autism), Asperger's syndrome and pervasive developmental disorder not otherwise specified (PDD-NOS).

ASD also falls into a broader category of conditions known as Pervasive Developmental Disorders, or PDDs. In addition to ASD, PDDs also include two rarer and more severe disorders: Rett syndrome and Childhood Disintegrative Disorder.

Typically appearing during the first three years of life, ASD has no known cause, but there does appear to be a genetic component. These conditions

run in families, and boys are four times more likely to develop ASD than girls.

Characteristics of Autism Spectrum Disorder

It is important to remember that ASD is not a specific diagnosis, but rather a term that refers to several related conditions. These conditions share similar symptoms, but they differ in terms of severity and the actual combinations of symptoms that appear.

The most severe form of ASD is autism, which is defined by deficits in three major areas of development: socialization, communication, and behaviour or play.

When some but not all of the deficits associated with autism are manifested, PDD-NOS or Asperger's syndrome may be diagnosed, depending on the aspects of development that are affected. A cardinal feature of all forms of ASD, however, is impairment of the ability to interact socially.

Children with autism have restricted, repetitive or stereotypic patterns of behaviours, interests and activities. These restricted activities can take the form of repeated body movements or intense preoccupation with one part of an object without any interest in the object as a whole or in its function. Children with autism typically have difficulties with verbal and/or non-ver-

In young children with autism, delays in early social development manifest as difficulty engaging in imitative or pretend play, and an inability to maintain “joint attention.” Joint attention refers to the ability to use eye contact and pointing in order to engage or share an experience with another person. A toddler looking at his mother and pointing to a toy, for instance, is using joint attention to show her the toy or communicate that he would like her to give it to him.

Teaching Social Skills to Children with ASD

As yet there is no known cure for ASD, and children with one of these conditions will show significant disability for the rest of their lives.

Given the importance of early social communication skills, there are current treatments for social impairments connected with ASD. They focus on teaching specific social skills in the hope that these skills will in turn help the children better interact with the world around them.

All educational processes involve assessing a child’s needs and setting goals for what will be taught. The goals for any interventions designed to improve social interactions for children with ASD are selected based on each child’s age or developmental level. They generally focus on teaching a desirable skill and/or decreasing an abnormal behaviour. Since social interaction is carried out by means of communication, determining treatment goals needs to be performed in the context of each child’s actual ability to communicate. For very young or pre-verbal children interacting with adults, goals often focus on pre-linguistic social behaviours, such as sharing interest in an object, taking turns, imitating, and focusing visual attention appropriately to adults’ actions (e.g., looking at what an adult is doing or making eye contact when an adult is talking to them).

To help younger children with ASD interact with their peers, therapy targets behaviour that encourages peer acceptance, such as sharing, showing affection, initiating contact and helping others. As children reach school age, goals of interventions shift toward allowing them to function independently in a classroom context. Thus, children with some speech must learn, for example, to express needs to adults and ask for help.

Educational interventions for young children with ASD generally fall into one of two theoretical frameworks: developmental or behavioural. In the first approach, the child’s development is compared with typical child development in order to identify problem areas and determine which new skills a child is most likely prepared to learn based on previous performance. In the behavioural approach, the focus is on unusual behaviours, such as excessive rocking, or a lack of usual behaviours, such as initiating social interaction. These behaviours are addressed individually with no concern for whether or not they may have a common cause.

Autism Spectrum Disorder affects approximately one in every 100 individuals

Each of these approaches has its advantages and disadvantages, but they have never been directly compared in a research setting. Studies assessing the benefits of these approaches have their methodological limits, including failure to control for factors like maturation and expectancy, as well as non-randomization of subjects. These limitations raise doubts about claims that the outcomes are due to the intervention itself and not other factors.

It remains unclear which intervention works best. Even when an intervention is successful, experts are unsure which elements of it produced the positive results. At this point, most ASD experts recommend using multiple techniques from different approaches, selecting those that best address the abilities and needs of individual children.

Large-scale group studies and comparisons of different interventions are still needed to provide solid evidence about the effectiveness of existing strategies, but researchers nevertheless agree that interventions for ASD should start as early as possible—ideally before age three. Early intervention can help prevent social deficits from eventually resulting in a negative effect in later development.

Consequently, a major challenge is how to ensure that children with ASD are identified early. There is no definitive medical test for ASD; diagnosis depends upon the observations of parents, most of whom are not trained to detect social and developmental problems.

Another fundamental challenge in the treatment of ASD is how to identify and understand the individual differences that affect how a child will respond to a specific treatment. Research shows that children who benefit the most from interventions tend to have higher IQs, are more willing and able to share an object or experience with another person, are more likely to initiate an interaction, and are less likely to avoid other children.

Fostering Socialization

The social development of children with ASD could also be promoted by providing them with opportunities to interact with groups of peers. Peer interaction is particularly important for children starting at the age of three. To benefit from this interaction, the children should be grouped with peers their age or slightly older who have been taught to help and encourage them to socialize. In some cases, help from adults may be required, but the benefits seem to be most pronounced when adults take a back seat and let peers play the main teaching role. Pre-verbal children with ASD benefit most from strategies in which their peers who are their age or slightly older teach them to initiate and persist in physical engagement. Those who are already using some language can benefit more from strategies focussed on helping them initiate verbal communication with peers. Social interaction is usually easier for children with ASD when the activities are fairly structured and the children enjoy them.

While there is no question that children with ASD face significant challenges, there is increasing evidence that, under at least some conditions, social interaction skills interventions can be beneficial. As experts continue to unravel this disorder and better understand its causes and the different forms it takes, future interventions should be better able to pinpoint each child’s individual needs and improve his or her social abilities even further.

To learn more about ASD, see the Canadian Autism Intervention Research Network website at www.cairn-site.com. The Centre of Excellence for Early Childhood Development at the Université de Montréal also maintains an online Encyclopedia on Early Childhood Development, which covers ASD and autism (www.child-encyclopedia.com). For more information about CCL, please visit www.ccl-cca.ca.