



Early Intervention Can Make a Difference

Utilizing Appropriate and Effective Approaches

While the causes of autism are still unknown, the autism community can celebrate the continued efficacy of early intervention with young children with autism spectrum disorders (ASD). Currently, the average age of diagnosis nationwide ranges from 3 to 6 years of age, with an average age of 2 diagnosed at specialized centers.

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This trend of early diagnosis should continue to move in this direction, as 30–50 percent of parents are concerned about their children’s development prior to their first birthday, and 80–90 percent are concerned by 24 months of age. This positive trend is remarkable as it means that more and more young children with ASD will receive services at a younger age, and the outcomes of these services may radically change their future. This is true if and only if the early intervention services are appropriate for their unique needs.

Features of Early Intervention Services

The critical features of appropriate early intervention services for young children with

ASD are quite clear, and include intensity, specialization, individualization, family involvement, instruction in their natural environment and outcome-based focus.

Intensity: While the debate continues over how many hours of direct service is optimal for young children with ASD, the accepted range appears to be 20–40 hours per week. However, intensity of focus is as important as time intensity. Young children with ASD need to be exposed as soon as possible to frequent opportunities to practice and be reinforced for engaging in adaptive skills. Comments such as, “He/she is too young for such intense therapy” or “Let’s give him/her time to develop on his/her own” should never be accepted, and intervention should never be postponed.

Specialization: Specialization in approach to treatment for young children with ASD translates into the use of techniques that have been proven to be effective through evidence-based methodologies. While there are a variety of treatment approaches being presented to parents, Applied Behavior Analysis (ABA) is the most widely accepted and extensively researched approach to the treatment of young children with ASD. ABA establishes the therapy environment based on systematic, planned teaching strategies, with a focus on determining why behavior changes. Specialization also means that therapists working with young children with ASD and their families have experience with this unique disorder. Understanding the complexity of each feature of ASD and how these features impact learning, social and behavioral skills is necessary in order to effectively plan and implement treatment intervention.

Individualization: Focusing on the individual child needs to be the basis of



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assessment, goal selection and treatment. Published assessments and curricula, not cookie-cutter plans, should be a guide to goal selection. The age, level of functioning, home environment and family priorities of the child must be at the forefront in order to create an individualized treatment plan.

Family Involvement: It is evident not only in research, but demonstrated in clinical practice, that family involvement and participation ensures generalization

of skills learned, and maximizes teaching time. Parents and caregivers need to feel empowered that they can make a difference in their child's life through their day-to-day interactions with their child. Behavior strategies taught to parents and caregivers need to be user friendly and applicable to family life.

Natural Environment: Learning and generalizing in the natural environment for a young child with ASD makes practical sense as he/she needs to have the immedi-

ate opportunity to practice a newly learned skill in the environment where he/she will use it. While some skills may need to be taught in isolation, the sooner the child uses the skill in the natural environment, the sooner that child "owns" the skill.

Outcome-Based Focus: The only way to judge the efficacy of early intervention with young children with ASD is to assess and judge the outcomes. Outcomes must be based on skills that are important to the development of the child. The outcomes

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must be objectively measurable to ensure real growth. Data must indicate meaningful progress, and parents and caregivers need to see positive changes in the day-to-day life of their child for outcomes to be worthy of attention.

Processing Deficits in Young Children with ASD

In order for a young child with ASD to attain significant positive outcomes from early intervention, there are several processing deficits that specifically relate to speech, language and communication that must be the focus of intervention.

Focusing on teaching a young child with ASD to process information efficiently must be differentiated from skill acquisition, which is teaching an isolated skill such as body part identification or rote counting. Processing information involves multiple levels of brain function, including attending to stimuli, acquiring new information, how the brain processes this information and application of the information.

Imitation: A significant processing deficit prevalent in young children with ASD is impairment in the ability to imitate. This impairment appears early and can persist into adulthood for individuals with ASD, and negatively impacts other aspects of development, including social and language skills. Imitation is the prerequisite for many skills, including symbolic play, reciprocal social play, and aspects of speech and language. While motor planning difficulties account for some of the challenges with imitation, they are not the primary underlying cause of the impairment. Therefore, the focus of intervention needs to be on assisting the young child to understand the concept of imitation (i.e., “see and do”). A typical first step to

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establish this processing is to teach gross motor imitation (i.e., “clap hands, arms up, stamp feet”). The ability to process imitation will begin to emerge once the child can imitate two to three movements randomly because this shows that the child is watching what the adult is doing and reproducing each specific movement.

Another way to teach a young child with ASD to process imitation is to model familiar movements with objects and have the child reproduce them. Examples include racing a car, banging a drum, shaking a bell, etc. Hand-over-hand assistance with a gradual fade will allow the child to experience and learn to imitate. Initially, the therapist may have to manipulate the child’s hand to perform the action; however, as he/she begins to perform the action, the therapist can assist less and less. This teaching approach allows the child to immediately see the function of the skills while teaching gross motor imitation focuses on the direct processing of imitation.

Verbal Speech: Another significant processing deficit observed in many young children with ASD is the inability to produce verbal speech. The presence of useful speech by the age of five is highly predictive of later positive outcomes. In addition, 20–40 percent of individuals with ASD will not develop functional verbal speech. There are no prognostic indicators that tell the speech and language pathologists which child will or will not develop verbal speech; therefore, there needs to be a significant amount of effort and energy in early intervention placed on establishing

verbal speech if the child is not already verbal. While there is an ongoing debate regarding the involvement of verbal apraxia (a motor speech disorder resulting in difficulty planning and producing intelligible speech) in young children with ASD, motor planning deficits as they relate to oral motor/verbal production are clearly evident in many of these children.

It is essential that speech and language therapists working with young children with ASD understand that the goal of establishing verbal skills is not for the child to produce singular movements or sounds, but for the child to process, control and produce sequences of sound combinations. This is the basis of useful speech. There is no magic or specific sequence of movements and sounds that need to be taught to the nonverbal child. The method has to be a total approach, and all attempts have to be made at eliciting controlled production of sounds and sound sequences through imitation, physical and gestural cueing, letter/word recognition, play, etc.

Discrimination: Differentiating language from speech ensures that focus is also placed on establishing language concepts and the ability to put words together to form understandable utterances. A pivotal processing skill that must be established early in the development of a young child with ASD is the ability to discriminate. Simply put, being able to receptively discriminate between two objects without any contextual reference is the beginning of this important language and cognitive processing skill. While

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having a young child with ASD learn to retrieve a cup when he/she wants a drink is important and clearly functional, true discrimination needs to be established out of context in order for it to fully develop as the basis of further cognitive and language development.

Social Communication: In addition to challenges with the processing of verbal speech, individuals with ASD struggle to some degree with social communication. Whether it is the lack of ability to share interests or reciprocity, young children with ASD need a great deal of assistance in this area. Gestures, as used to communicate, must be prioritized as a goal. Teaching a young child to point to a desired item, or raise his/her arms to be picked up, sets the stage for communication. Joint attention, which is the coordination of visual attention with a social partner regarding an object or event, appears around 6–18 months of age in a typically developing child; however, this skill is frequently absent in young children with ASD. Since the desire to share cannot be taught, the focus of teaching joint attention is on the behavior itself; that is, having the young child look at an interesting object, event or activity, then look at the social partner, then look back at the object to close the interaction. It is hoped that, after frequent exposure to both initiating and responding to joint attention, the child will develop the actual interest in sharing.

Symbolic/Pretend Play: Further addressing the processing deficits that relate to speech, language and communication

demands a focus on play skills, particularly symbolic/pretend play. The ability to creatively think and understand abstract thought positively impacts language and learning. Young children with ASD typically engage in manipulative play, but are rarely seen engaging in social imitative play (i.e., “feeding the baby” or “making dinner”) or symbolic play (such as taking a block and flying it as an airplane). The earlier appropriate symbolic/pretend play is established in young children with ASD, the sooner their language and thinking become flexible and self-generated. Young children with ASD should initially be instructed to engage in social imitative play once imitate skills have been established. This can simply be taught by the therapist modeling the play action, and the child imitating it. Moving to symbolic/pretend play is more complex and requires a significant amount of attention when designing the intervention plan.

Again, the foundation of the teaching is imitation; however, this play must develop so that it is produced without a model. Initially modeling and having the child imitate play schemes, such as pretending to be an animal or a community helper, sets the stage for spontaneous variations of these play schemes as well as self-generated pretend play.

Symbolic play can begin with teaching the young child with ASD to use a place holder during play instead of the actual object. For example, the therapist and the child pretend to fly a toy airplane around the room, then the airplane is “lost” and

the child is encouraged to use a wooden block in place of the airplane—and the play continues. The emergence of symbolic/pretend play in the child is another positive indicator of later outcomes.

Optimism and excitement about the efficacy of early intervention services for young children with ASD needs to energize therapists and empower parents and caregivers. Continued attention must be given to effective, evidence-based approaches as the child’s (and family’s) time should not be wasted on ineffective techniques and treatments. Outcomes need to have significant impact on the life of the child and his/her family. The earlier the gaps in development are closed, the better the prognosis for the young child with ASD.

Resources

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