



Special Needs: Identification and intervention in the Early Childhood Years

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Do you remember the day when you took your first step? Chances are you don't. Early childhood is a blur: our earliest memories only go back to about age 3. When you think about it, growth and development in the early years is a miracle. In the first three years of life, 90 percent of brain development is completeⁱ. By six years, we have learnt to walk, talk, feed ourselves, join friends in play, demonstrate curiosity and express emotions.

Everything in nature is programmed to unfold in a pattern. For instance, babies gain control over their bodies in sequence from the neck to the hip and from the core to the extremities. At birth, the infant brain has up to 100 billion neuronsⁱⁱ! In the first few days, the number of synaptic connections per neuron is 2,500ⁱⁱⁱ. This increases six times by the age of 3.

While pioneering Developmental Psychologists such as Jean Piaget and Lev Vygotsky proposed theory on child development, contemporary research can today validate their claims with scientific data. Did you know that newborns can recognise happy and sad faces? Or that at birth, babies can see objects and human faces at 8-10 inches distance? The potential for learning before a child turns six is immense.

For an Early Interventionist like myself, these early years of neurological development are fascinating and humbling too. It is the time to actively partner with families to support children whose

development patterns are disordered, disrupted or delayed. In a broader sense, every one of us is an Early Interventionist in a child's life. All it takes are good observation skills and a deep understanding of developmental goals and milestones.

Birth and the first year

Until recently in Hong Kong, I worked intensely with 0-3-year-olds who were referred through the Government Health Care Service. The patterns of intake showed us that there are three big opportunities for early identification of developmental disabilities in the early childhood years.

Our youngest referrals are only a few days old. Where there are proactive early detection services, severe disabilities due to trauma or genetic disorders can be detected right at birth (or prior to birth), at the hospital itself. One of our students was only 18 days old when we first set eyes on her. Her condition, a rare genetic disorder called Prader-Willi Syndrome¹ (PWS), had been identified at birth at the Government Hospital; the incidence of PWS is one in every 12,000-15,000 people.

Nature always throws up challenges that force us to rethink our ideas of normalcy and development. One such challenge is being able to respond to the needs of children with genetic disorders. Today, there is a wealth of information and parent support networks for children diagnosed with rare genetic

ⁱEngaging Families in the Early Childhood Development Story, Page 7, Para5 line9 http://www.mceecdya.edu.au/verve/_resources/ECD_Story-Neuroscience_and_early_childhood_dev.pdf

ⁱⁱChildren and Brain Development: What We Know About How Children Learn , Bulletin #4356, Cooperative Extension Publications, The University of Maine , para 2 line 1. <http://umaine.edu/publications/4356e/>

ⁱⁱⁱChildren and Brain Development: What We Know About How Children Learn , Bulletin #4356, Cooperative Extension Publications, The University of Maine , para 3 line 2. <http://umaine.edu/publications/4356e/>

¹Prader- Willi Syndrome: a chromosomal disorder with a prevalence of: 1:12,000- 15,000 (both sexes, all races) The major characteristics are low muscle tone, cognitive impairment, difficult behaviours, and an obsession for eating that leads to morbid obesity. <http://www.pwsausa.org/syndrome/>

disorders like Prader-Willi Syndrome, Cri-du-chat, Rubinstein-Taybi Syndrome, mitochondrial diseases, to name a few that are identified at birth. The initial years present parents with the struggle of handling grief, disappointment and anger. When mothers are unable to get started with stimulation programs at home, they sometimes slide into depression. Yet, I have also known and worked with a mother who opted to have a child with Down Syndrome and embraced him wholeheartedly.

As I have seen both in Hong Kong and in India, in the first year of the lives of such children, medical interventions—surgeries, and visits to feeding clinics—demand urgent attention. Nevertheless, there is a place for Early Intervention too. Recommended activities at this stage to stimulate and monitor the senses and encourage movement and early communication are:

- Encourage playing in different positions: lying on the tummy, sitting, standing, kneeling.
- Use developmentally appropriate toys in play: rattles, balls, blocks, nesting cups, peg rings and push-cars.
- Play games that stimulate the senses: listening to environmental sounds, tracking objects, imitating sounds, imitating actions, for example, clapping, waving, patting etc.
- Encourage pointing, commenting, labelling things, choice-making while reading, storytelling and singing.

The second year: Time to talk

The second opportunity for Early Intervention arises during the second year of life. A child's vocabulary quadruples from the first to the second birthday^{iv}. Here is a typical example of a situation when this milestone is delayed. When Josha was 2-1/2 years old, his paediatrician diagnosed him with speech and language delay. From early on, Joshua preferred to play with his cars, obsessively. He had a beautiful smile, but it was difficult for him to look at you and talk. He mostly preferred to remain unnoticed.

Early intervention is, in a sense, a conversation with Nature, which is constantly inviting us to act. In the case of children like Joshua, the learning needs are

complex and connected to a undetected developmental coordination disorder. At this moment, he needs to communicate and share his excitement and we need to follow his lead. Care givers like his are at a loss for ways to support his speech and language development. Unfortunately, there is a resistance to using simple communication strategies such as baby signs and picture communication for fear that speech development may stop. But this fear is unfounded. Opportunities where children like Joshua can make choices of food, toys, books and say 'yes/no' or 'more/finished' actually lower frustration levels and encourage participation. Naturally, children begin to feel secure and reassured - which is a precondition for play, communication and language development.

I used baby signs based on the Makaton signing system^v for many years. Here are three success stories that are illustrative:

- At age 2-plus, Peter (diagnosed with Down Syndrome) could sign for his favourite music, books and toys.
- At 24 months, Shea (diagnosed with PWS) signs—even before she can stand! As her family and teachers understand her, the tears and frustration are gradually vanishing
- Anthea was diagnosed with speech and language delay, but at age 3, speech has started to come on and, interestingly, her finger-signing communication is disappearing.

Recommendations for stimulating speech and language development at home and in play groups:

- Follow your child's lead, repeat what she is saying, extending the sentences and encouraging imitation. Use favourite play, books, songs and give plenty of choice in daily life.
- Choose a few baby signs to practice each week. Train parents and care givers to make sure that the circle of communication expands. Always use sign communication even as you talk, read and sing.
- Choose three books to read everyday and read the same books for 2-3 weeks. Use toys and

^{iv}Baby's brain begins now- Conception to age three <http://www.urbanchildinstitute.org/why-0-3/baby-and-brain>

^vMakaton is a language programme using signs and symbols to help people to communicate. It is designed to support spoken language and the signs and symbols are used with speech, in spoken word order. <http://www.makaton.org/aboutMakaton/>

picture cards to match the story. In the absence of books, use familiar stories and picture cards.

- Sing five songs everyday. Drop the words as you sing and encourage your child to finish the lines.
- Play turn-taking games: matching and sorting pictures, drawing pictures together, ball games etc.

Kindergarten: 3-6 years

The third big opportunity for Early Intervention arises upon Kindergarten entry. Kindergarten teachers can help identify and support children who struggle with clumsiness, self-regulation, social anxiety or low motivation. Play and social communication are developmental areas that need special attention to ensure future school inclusion and to build a friendship circle. Drake's story is illustrative of this. Drake sits in silence in his kindergarten class. He usually plays by himself, whereas his peers are beginning to play in pairs. When he is upset, he has a huge outburst and struggles to calm himself down. And while Drake is a fluent reader, he is unable to express himself in simple sentences.

It is a balancing act for the early interventionist to ensure that all areas of a child's development are being addressed. From my experience, working closely with the child's Kindergarten teachers helps create a supportive play and learning environment.

Recommended strategies on creating an inclusive classroom for Kindergarten teachers:

- Avoid labelling a child's behaviour that appears different. Advise parents to consult their paediatrician. Assess your students' likes and dislikes. Children have different types of sensory profiles. Prepare a sensory checklist of classroom material and make note of unusual responses.
- Be patient and reassuring and give children time to respond. Some children need more time to process information.
- Create an inclusive classroom using visual supports, such as visual schedules of the timetable, visual cue cards to prompt good listening and looking during group time, and visual sequence cards that tell children how to carry out tasks step by step.
- Work out your communication strategy for children with speech delays. You can use baby

signs and picture communication and choice boards. Lately, the digital tablet, with its treasure trove of apps, has some great options that support communication. Collaborate with parents and therapists on this.

- For safety and reassurance, have a Help Card with your photograph on the board and a chart with four emotion cards (happy, sad, angry and tired) for children to tell you how they feel.
- For children who crave movement, increase their time in the playground, and include activities like bouncing on the gym ball and walking on a balance beam.
- Fiddle boxes help to soothe children with fidgety fingers. Rubber numbers and alphabets, shapes, and textured toys of a safe size can calm and soothe restless children as do bubbles, play dough and a cuddle.
- Emotionally sensitive children draw comfort from music. A sensitive teacher will ask a mother to drop off her child's favourite CD.
- Identify classmates who can model-play during play time. Talk about how to join in and play, and organise simple turn-taking games in small groups to practice.

Conclusion

The pace and extent of development in the first three years of life is phenomenal. This biological moment presents opportunities to provide young children with special needs with rich environmental stimulation. Everything that we do in the early years will contribute to a child's neurological development and prepare the family to respond to her needs. Follow-up requires fierce determination. Children with genetic disorders or birth trauma can be identified in hospitals. Other types of special needs could show up as developmental milestones unfold. At two years, there is a burst of language vocabulary that must be taken advantage of. Learning baby signs and using picture communication along with rhymes, songs and stories support the development of speech and language—contrary to popular perception that alternative communication will inhibit speech. Kindergarten teachers can support early intervention with regular collaboration with parents and professionals. As I have learnt from my

experience, often the early intervention team becomes a family in a large impersonal

metropolitan city. In this way, a circle of friendship and hope emerges and carries on.



Anuradha, until recently, worked in Hong Kong as an Early Interventionist with children with special needs in the 0-6 age group, under the auspices of an early education centre sub-vented by the Hong Kong Government program serving the non-Chinese-speaking population. She trained as a special educator at Vidya Sagar, Chennai, 20 years ago and was introduced to the transdisciplinary approach there. Her practice has evolved to reflect this as she constantly strives to weave together therapy, education, and alternative communication into a fun-filled process of learning for her students. Anu can be contacted at anuradha.naidu@gmail.com