

Autism and Sensory Processing

By Colleen Shaw, B.Sc (OT)

New techniques for working with autistic children are making a significant difference for children and families in the Nelson region. The methods arrived on our doorstep early this year when an overseas therapist joined our Early Intervention Team. We think we might be the only ones in New Zealand doing it quite this way. These new techniques coupled with my past experience have enabled me to better understand the nature of autism and to implement more effective intervention.

My first job when I graduated from the University of Toronto in 1976 with a qualification in Occupational Therapy, was to work in a summer program for 25 autistic children between the ages of five and ten from all over Ontario. I still have the camp photo of the children with 23 little boys and 2 little girls all disconnectedly grouped together and all looking every which way except for the one or two that had a thing about cameras.

I wasn't hired to work as an Occupational Therapist, which was good because I didn't have to pretend I knew anything. I was to be a one-on-one caregiver and behavioural monitor in a highly structured state of the art 'summer camp'. I was open to learning about autism from the myriad of professionals and other student camp counsellors. I was fascinated with what I was told were called the 'fairy children' in the Middle Ages. People then believed the odd behaviours in autism were the work of fairies who stole these beautiful but socially absent children.

And I did learn heaps. My charge was 7-year-old Stephen who walked like Charlie Chaplin. He also frequently rocked from side to side. His greatest love included water and being pushed on swings. I operated a token economy with him where he would pay me to play with those things with tokens he had earned throughout the day. I understand now what I didn't know then why he looked that way and why those things were important to him and why he became so distressed when his access to them was curtailed.

I learned the nuts and bolts of running a behavioural program and that it works to shape learning behaviours, but how it didn't complete the whole puzzle. There was the problem of generalisation. There was the problem of practical transferring of these programs to everyday busy home life. There was the problem of accommodating the often mystifying and destructive autistic behaviours that wouldn't go away like flapping, throwing, and various ritualistic obsessions.

Jean Ayers, an Occupational Therapist involved in research with children with learning disabilities had recently made waves by publishing a book in 1972 called Sensory Integration. Her theory is that some children with these problems have difficulties in the processing of sensory information - touch, smell, taste, hearing, vision, movement, and body awareness through deep pressure or vibration through the joints. Conventional teaching methods concentrate on vision and hearing, but if the centres of the brainstem which process the 'primitive' senses are not working effectively, it will compromise the child's cognitive development.

The Sensory Integrative theory was applied to a whole range of children including those with

autism who were lacking normal mechanisms to bring their neurological system into balance so they could be open to learning from their environment. An entire treatment system of Sensory Integration Therapy sprang up which included sessions in a treatment room where different types of tactile and movement experiences like swings were used to help the child normalize his basic sensory systems.

I embraced this treatment approach enthusiastically. However, I found that the results seemed to vary a lot. I remember one case that produced such a dramatic result with an autistic child that the staff of the pre-school where this child attended invited me to talk about what magic had been worked. I have seen children in a treatment session perform tasks which they did not do outside very easily. I have also had a good number of Children who began to vocalize more or seem to be able to relate to their environment indeed like a door had been opened. However, there were also children who underwent treatment who did not seem to make progress at all. More often there were subtle changes to children that would be difficult to pinpoint entirely to the therapy, as there was a great deal of other input from many different sources--Sometimes these changes would be permanent; often they would fade after I came to the end of my weekly sessions. Although home programs seemed to make a difference in some of the children, the erratic results made me hesitant to prescribe them as a matter of course.

I felt another reason why this approach is impractical is that the requirements to deliver treatment sessions three times weekly to give optimal results is impossible to achieve within the constraints of any public healthcare system. Given all of the above problems I became disillusioned at the hit and miss nature of this treatment approach.

And then Becky came into my life; Becky Lawson is a young therapist from my home and native land, Canada, who is working with our team in Nelson for a year. She has received a postgraduate certification course from the Geneva Centre, a Toronto based program that services autistic children and their families. It seems that while I was tucked away in Nelson NZ, there have been advances in the understanding and application of sensory integration in the treatment of autistic children. She brought with her more specific tools on the assessment of the sensory processing of these children that helps customize a treatment for an individual child. As well, she brought compelling stories like the one about the boy who was forever destroying the light bulbs in his family home. In analyzing the boy's behaviour, they found that he sought auditory input and thus, he craved the specific sound of the light bulb filament as it shattered. When they replaced the sound with the ping of a small object in a balloon, the destructive behaviour was eliminated.

There are several aspects to this more refined treatment approach that more clearly explain the autistic child's behaviour from a sensory perspective. These are integrated into the child's home and school life. We have been assessing and prescribing specific programs for children on our caseload who are anywhere along the autistic spectrum. The results have been remarkable!!!!

The most striking case was a three-year-old child with severe sensory avoidance behaviours. Following a specific program under our guidance, began to eat a greater variety of foods, overcame her fear of the toilet, became less panicky in new situations or away from her mother, became more confident in her motor skills, and stopped crying because her parents held her 'too hard'. Her mother refers to the sensory input as a 'magic button'. Another child discarded his inappropriate mouthing and licking behaviour. Another boy stopped walking on

his toes and became more attentive in on -on-one structured learning time.

Becky gave a workshop to rents explaining the concepts of these intervention strategies and they remarked that they understood the behaviour of their children better. One mother with a daughter who-didn't sleep through the night, having heard the presentation, went into her daughter's bedroom when she heard her beginning to stir in the wee hours and gave her a huge bear hug for deep pressure input and the child slept in for the first time in weeks. This was not something that would be advised by a pure behaviourist, yet it seemed to have the desired effect.

After implementing these programs, both parents and I are in no doubt that the striking results can be attributed to these new strategies. The other professionals in the multi-agency Early Intervention Team with whom we work have witnessed the positive impact on these children and are now in the process of tagging funds for a pool of equipment that can be loaned out to parents in implementing their sensory programs. Becky and I are in the process of gathering more experience in fine- tuning these programs, and working with the accommodation and cumulative effects of sensory input to the children. We hope to share information on the specifics of sensory programs with parents, teachers and caregivers in other centres in New Zealand next year.

I am excited. I am beginning to understand why my former treatment methods were sometimes effective and sometimes not and sometimes anything in between. I now know how, twenty-five years ago, I could have made Stephen's learning easier using an approach specific to his sensory needs. Instead of having him redeem his behaviour tokens to use the swing, I would have used swinging as a tool to open him up to the world around him. With the new research on the importance of visual learning for autistic children, a more complete understanding of the individual child's sensory experiences and consistency in behaviour shaping and management and even with more information on nutritional needs, I feel we are starting to make sense, piece by piece, of the autism puzzle. And when we do that, perhaps one day we can take the children back from the fairies and bring them home.

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