

Case Study

Alan was deemed unschoolable, having tried eight different schools by the age of nine. His Autism and ADHD crippled his social and academic skills, rendering him friendless and functionally illiterate. Having recently completed a 40 session Maxi Mind course, Alan is back in school and happy about it because for the first time in his life he is enjoying academic and social success.

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Alan is a 10 year old boy from the Greater Toronto Area, multiply diagnosed with Autism (High Functioning) and ADHD (combined type). He was described as an affectionate and sensitive child who enjoyed conversation but was highly inattentive and disruptive. He had poor social awareness, restricted interests, repetitive behaviours, poor voice modulation and suffered from motor and vocal tics.

By the age of nine he had gone through eight different public and private schools because he could not be sufficiently accommodated. Included in these eight were two highly reputed schools exclusively dedicated to serving disabled student populations. His parents then tried home schooling but this proved equally unsuccessful. Numerous interventions and tutors were tried but to no avail, although dietary changes and supplements did provide some amelioration of symptoms. At that point, Alan's speech and motor development were close to par but his social skills were extremely impaired and he was completely unable to read, write or do math, even at Grade 1 level.

When Alan's parents first contacted Maxi Mind, in 2011, they were eager to try the therapy but their financial resources had been completely exhausted and through shortage of employment their income had declined to poverty-level, which caused considerable hardship for their family of six. The several thousand dollar cost for a customized course of Maxi Mind's neuro-educational therapy was totally beyond their reach. They applied to Project NES for a subsidy but the subsidy fund was entirely depleted. Alan's desperately needed therapy would have to wait.

Then, in the fall of 2012, due to the generosity of a corporate sponsor, Project NES was finally able to offer Alan a full subsidy and a 40-session Maxi Mind course was customized and delivered through one-on-one sessions with a certified Maxi Mind Neuro-Educational Therapist.

Alan's training regimen consisted of sensory integration exercises, engineered listening, and neurofeedback focus training plus some fine motor, cognitive and reading exercises.

The sensory integration exercise protocol was blended from Brain Gym, Balametrics, the Learning Breakthrough Program and the exercise component of the Integrated Listening System (iLs). The listening protocol used was the iLs Attention and Concentration music. Normally one should use Sensory Motor music with ASD+ADHD cases but Alan's Sensory and Sensory Motor functioning was relatively high so we opted to focus directly on his weaker area – concentration and attention. We believe this decision contributed significantly to the effectiveness of the course. The neurofeedback focus training protocol used was the Play Attention system developed by Unique Logic and Technology.

Cognitive Assessment

Alan was assessed before and after the program with MindStreams, a medical-grade, computerized cognitive testing program, provided by Neurotrax Corp. The pre and post measures quantified Alan's cognitive improvements over the course of the Maxi Mind treatment. The Neurotrax assessments indicate improvement in six of seven cognitive domains evaluated: Memory, Executive Function, Attention, Information Processing Speed, Visual Spatial Skills, and Motor Skills. The seventh cognitive domain, Verbal Function, could not be assessed because Alan was not able to complete the test and his Memory skills improved but were still in the extremely low range. The rest of Alan's cognitive skills all ended up within the normal range.

Rating Forms

Alan's parents rated his performance before, during and after his Brain Training Course using Maxi Mind detailed rating forms assessing 58 behaviours on a 1- 4 scale. The improvement was dramatic with no behaviours getting worse, and the great majority getting better, as follows:

Sensory & Sensory Motor

- Bothered by background noise, loud, unexpected sounds -much better
- Fidgets with hands or feet or squirms in seat -much better
- Bothered by textures on body, face or hands, having nails cut, hair combed - better
- Doesn't feel pain, doesn't notice when touched - better
- Difficulty remaining seated -much better
- Constantly on the move, seeks intense crashing or rough play - better
- Has poor balance and falls easily, avoids balance-related activities (bike riding) - better
- Has poor endurance, is weak and gets tired easily, avoids physical activity - better
- Has difficulty sitting still, wiggles a lot, esp. if trying to pay attention improvement -much better
- Slumps when sits in a chair or on the floor, uses arms/hands to support self - better
- Clumsy, awkward, or accident prone, tripping or bumping into people or objects - better
- Struggles with fine motor skills, like handwriting - better
- Makes disruptive noises or sounds -much better
- Dislikes or avoids group sports - better
- Cannot follow directions in a noisy environment - better
- Has difficulty judging force required for a task - better
- Difficulty organizing personal spaces, takes a long time to perform daily life tasks -much better

Auditory / Language

- Misuses or confuses words and sounds -much better
- Needs to be given directions repeatedly before responding -much better
- Difficulty with spelling - better
- Tendency to ramble, can't "get to the point" - better
- Poor grammar, doesn't speak in complete sentences - better

- Seems to not understand what is said, i.e. poor comprehension, needs explanations - better
- Social / Emotional -much better
- Does not transition smoothly from one activity to another -much better

Social / Emotional

- Irritable, short-tempered - better
- Easily overwhelmed, frustrated by daily life activities - better
- Has difficulty making and keeping friends - better
- Does not sleep well, can't get enough rest - better
- Has frequent mood fluctuations - better
- Lacks of tactfulness, acts impulsively - better
- Response to situations appears immature for age - better

Organizational / Attention / Cognitive

- Is distracted easily, not able to stay on task - much better
- Has poor short term memory - better
- Planning ahead is difficult, prefers to avoid planning at all - better
- Disorganized with school assignments, belongings, schedule - better
- Often fails to begin or to complete tasks or projects unless helped - better
- Must re-read schoolwork several times to comprehend - much better
- Has difficulty getting/finding clothes, getting dressed in the morning - much better
- Can't remember sequential tasks – e.g. do A, then B, then C - much better

Alan's mother reports that after just 7 sessions, he was noticeably more self-aware, communicative, accountable for his behaviour, and actively involved in clean-up times, all of which was a refreshing change. These improvements continued throughout the program.

Even before completing the Maxi Mind Course, Alan's functioning was so much improved that he was able to enrol in a mainstream private school where he attends three hours a day and is making great strides daily in reading, writing and comprehension with the help of a dedicated teacher's assistant. His social life is improving and for the first time in his life, he enjoys school, is seeing some success in his studies, and has developed a can-do attitude to his class work and assignments.

And, needless to say, Alan's parents are thrilled.



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