

Impact Evaluation The NAS Furness BrainChild Project , 2008/9

By Viv Hailwood

The BrainChild Developmental Program©



BACKGROUND

The National Autistic Society (NAS) Furness group were introduced to The BrainChild Developmental Programs through their Branch Organiser, Jackie Bell.

Through her work, she had attended a course for professionals provided by Cumbria Children's Fund. She understood that the concept could help the children in the NAS Furness group and invited Viv Hailwood, of BrainChild, to deliver a presentation to parents in January 2008. There was unanimous support for *BrainChild Program Three* to be delivered to several groups.

Funding was applied for, an excellent venue secured and in autumn 2008 the four groups of children and parents began four group-specific programs spanning a period of 6 months.

We laughed such a lot.
It was a great group.

The program has helped us to understand the difficulties our son has and shown us how we can help him.

BrainChild - It's just a fun thing. Taking part doesn't feel like a chore. He enjoys the movements and it is a social thing. To begin with he wouldn't play or take part. Now he is playing cooperatively and interacting with everyone, even holding hands with others.

The BrainChild Program has provided a very helpful and enjoyable series of sessions that have had very positive effects on our child's development. The sessions have been fun for both parents and children.

I think every special needs child should be able to have the chance of the Brainchild program.

It is also very rewarding to watch your child learn to do something right before your eyes which we had taken for granted or never thought was important.

We have had more fun together and have enjoyed being part of the group.

More on page 46.....

We were hoping for any improvement at all. But I didn't think it would make a difference.

It's made a massive difference."

CONTENTS

	Page
Background. Overview of The BrainChild Developmental Programs©	3
Summary. Results and Conclusions.	4
Overview of the Project. The Aims, Success Criteria, The Process: Registration, Initial Assessment, The Groups, Reporting the Impact.	5
Results: Issues identified by parents at Registration	9
Positive Behavioural Change	12
Conclusions	19

FIGURES

Figure 1. The Characteristics of the reflex response of the Asymmetrical Tonic Neck Reflex.	7
Figure 2. The Key Issues identified by parents at registration – Reported positive change.	11
Figure 3. All groups : Common areas of parental observation of positive behavioural change after the BrainChild Development Program.	16
Figure 4. Groups 2 & 4 : Common areas of parental observation of positive behavioural change after the BrainChild Development Program.	15
Figure 5. All groups : Summary of percentage of cases reporting positive behavioural change for each behavioural descriptor.	16
Figure 6. Groups 2 & 4 : Summary of percentage of cases reporting positive behavioural change for each behavioural descriptor	17
Figure 7. Sample Characteristics	18

APPENDICES

Appendix 1. Examples of a re-assessment report for two of the cases	22
Appendix 2. Two examples of a feedback report half way through the Program	27
Appendix 3. Information reported by parents/ carers taken from the individual post-BrainChild reports	31
Appendix 4. A few comments about the BrainChild Developmental Program	45

The BrainChild Developmental Programs

What do they do?

The BrainChild Developmental Programs have been designed to address the increase incidence of developmental disorders observed in our schools. The increase in cases with diagnoses of Autistic Spectrum Disorder is one example, but many other children are more mildly affected and fail to achieve their potential.

Viv Hailwood has developed these active programs from a position of wide experience of working with children in different roles. Her background includes a medically-based therapy training in Speech Therapy (B.Sc.), a long and successful career as a teacher and head teacher and a lifelong interest in neurology and research, including an M.Sc. in Educational Research.

Her deep understanding of the importance of movement developed through decades of coaching of gymnastics and teaching dance across the age groups. This was from beginners at age 5 years to National and International level, including champions. She has a particular interest in children with Autistic Spectrum Disorder.

What is Neuro-development?

A baby is born with reflex actions that dominate movement and the brain's ability to exercise conscious control. These reflexes support the position of the baby *in utero*, aid the birth process and protect the baby in early life. In typical development they are no longer dominant by the end of the first year of life.

The reflexes become less dominant as a result of movement. This is called integration. If these primitive infant reflexes persist, they limit brain maturation. The children in the NAS Furness groups were assessed for infant reflex integration levels and this formed the basis for the program developed for each group.

The BrainChild Developmental Programs address the problems that develop as a result of the persistence of the infant reflexes. There are many influences, but specific movement is key.

There are three distinct BrainChild Developmental Programs designed for different settings and personnel. They are as follows:

Program one: Designed for delivery in mainstream schools to classes and groups by non-specialist teachers.

Program two: A hands-on program delivered by professionals in a therapeutic setting, with parental involvement in the home program.

Program three: Delivery by specialist professionals with groups of children with special needs with their parents. This is the program used with this sample.

SUMMARY

The main purpose of this report is to evaluate the impact of The BrainChild Developmental Program on the lives of the children and families involved in the 4 groups at NAS Furness from September / October 2008 to March / April 2009.

It provides information about the organisation of the programs with the NAS Furness groups and a simple analysis of the feedback from parents and some of the children regarding the changes in behaviours identified as problematic at the start of the program.

RESULTS

Concerns recorded by parents at registration – Pages 11 and 12

The results show an 88% positive change in the behaviours of greatest concern originally identified by the parents of the participating children at registration. Concerns that showed no change included medical issues and broad statements.

Behaviours causing concern reported at the initial assessment (Using The Observed Behaviours Checklist)

Additional behaviours that were reported as areas of concern by parents at the Initial Assessment were recorded and reviewed.

Common areas of difficulty are evident in the sample. The most frequently reported behavioural descriptors (> 50% of the 16 cases) were reported to have shown positive change of 97 % across the descriptors.

CONCLUSIONS

The percentages of positive changes in behaviours observed and reported by the parents of the children taking part in the BrainChild Developmental Programs over a period of six months are high.

The most consistent areas for positive change recorded in a minimum of 50% of cases were in the following behavioural categories. 100% of parents reported positive change:

- 1. Aggression, hostility and impatience** - perseverance, aggression, impatience / tantrums, violence / self harm, co-operation and response to stress.
- 2. Communication** - following instructions, understanding and listening.
- 3. Health and physical impact** - balance, co-ordination, ball skills/swimming/bike riding, posture, toe walking/gait.
- 4. Focus and Attention** – concentration, alertness.
- 5. Social Interaction and awareness** – choosing interaction, social isolation.
- 6. Anxiety, fears, obsessions** – withdrawal/refusal/running away, coping with change.
- 7. Learning** – motivation, academic, reasoning, cause and effect, fine motor.
- 8. Sensory** – hyperactivity.

In those cases where it was also possible to measure the key infant reflexes using physical testing at the baseline initial assessment, the infant reflexes have shown to be fully integrated or improved in all cases.

Although causal effect is difficult to prove, the changes occurred over the 6 month period while the BrainChild Developmental Program© was running.

Many families saw changes in the first month in lifelong problems. One example is a girl of 12 years who had always had disturbed sleep patterns, awaking the family several times in the night, with very early rising at 4.30.am, She began to sleep throughout each night, awaking in the morning 2- 3 hours later.

**EVALUATION OF THE IMPACT OF THE BRAINCHILD DEVELOPMENTAL
PROGRAM©
A Behavioural Analysis**

***NAS GROUP- FURNESS, CUMBRIA – A GRANT FUNDED COURSE TO ENABLE
ACCESS FOR ALL FAMILIES.***

OVERVIEW OF THE PROJECT

THE AIMS

The aims of the project were twofold and were to:

- Establish the extent to which a positive impact on observed behaviours in participating children might relate to a reflex integration program designed to reduce levels of persisting infant reflexes.
- Have a positive impact on the life of each child and their family.

This was to be achieved by:

- Providing a program of 10 sessions with the families to introduce specific physical activities that would a) integrate infant reflexes b) assist sensory integration.
- Training the parents to deliver the activities daily, at home.
- Integrating the presenting un-integrated infant reflexes of the children taking part, thus impacting positively on the child's behaviours.

The project included:

- Individual assessment of each child.
- A training meeting for parents.
- Ten sessions with the families of one and a half hours each, spread over six months, including infant reflex integration and sensory integration activities and the training of parents practice them at home.
- Individual re-assessment of each child.

SUCCESS CRITERIA

Positive change in the behaviours reported by parents to be:

- causing concern
- limiting happiness and success in life and learning for their child
- impacting on family life.

THE PROCESS

There were 19 parents and 4 professionals at the original parent meeting where the BrainChild Developmental Program was presented. Of those parents, 14 of them joined the program and 5 more decided to take part after listening to the parents discuss the information at the next meeting.

The participants in the BrainChild Developmental Program© attended for an initial individual assessment in July and August 2008. They began the 10 session program in September or October 2008 and completed in March or April 2009 – 6 months. Re-assessments were made between April and June 2009.

REGISTRATION

When they registered, the parents/carers were asked to indicate **the key issues** that were causing them concern and these are the statements entered in **Figure 2.** (pages 11 and 12.)

In some of the cases where the learning difficulties were profound, the parents had difficulty itemising specific behaviours. General statements were made, such as: *Acts young for his age, Slow to learn, Severe Learning difficulties.* Where the statement made by the parent/guardians is one of these general descriptions it has not been highlighted as an improved area because it is such a broad statement.

More detail is shown in the individual reports in The Appendix (page 22).

THE INITIAL ASSESSMENT

The Initial assessment included:

- a case history
- a physical reflex assessment
- a detailed behavioural assessment relating to infant reflex integration – The Observation of Behaviours Checklist.

The Physical Assessment

Some children were unable to understand, copy or co-operate sufficiently to take part in the physical assessment. Others were able to take part in selected tests.

The Behavioural Assessment

The behavioural descriptors are infant reflex specific. They provided information to support or take the place of the physical assessment where the children were unable to take part.

Many additional difficulties emerged at the Initial Assessment that were not mentioned as key issues at registration. These included a range of problems relating to the functioning of the whole child such as sleeping, eating, aggression, communication, attention, concentration, obsessive behaviour, repetitive behaviour and physical issues relating to limiting problems such as balance, coordination and posture. These behaviours were having an impact on the child and their family.

THE GROUPS

The participants in the groups were selected in consultation with Jackie Bell, NAS Furness, using her records and knowledge of many of the children. They were well matched. Ages ranged from 7 to 15 years.

1. A maximum rule of six children and their parents was applied to those groups of children with Asperger's diagnoses.
2. A maximum rule of four children and their parents was applied to those groups of children with classic autism and genetic disorders with learning difficulties.

(50% of the classic autism groups were recorded as having Complex Profound Learning Difficulties, 25% Severe Learning Difficulties and 25% Learning Difficulties) The group sizes ranged from 4 to 6 children and their parents. In each session, each child was partnered with their parent(s). As the sessions progressed they also took part with other children and adults in small group activities.

Group 2 functioned as a group for six sessions and then worked individually in half hour sessions for the remainder of the sessions. This was due to the severity and diversity of their individual needs and parents expressed that this worked well.

The project began with 19 children and their families. Each child has been given a code letter from A to S.

- Group 1: CASES A to E- diagnosed with Asperger's syndrome, ASD (1) and in mainstream schooling.
- Group 2: CASES F to I - diagnosed with ASD (2), Cerebral Palsy (1) and West Syndrome (1), attending special school.
- Group 3: CASES J to O - diagnosed with Asperger's syndrome(4), Dyspraxia(1) ASD(1) and in mainstream schooling.
- Group 4: CASES P to S - diagnosed with ASD (2), Kibuki Syndrome (2), attending special school.

The individual reflex profiles of children in each group were used to create an appropriate plan of activities for each group. Group 2 did not fully complete their program due to the severity of their difficulty. Some members of group 4 were also unable to complete the full program. It would be desirable to continue in order to complete the process and achieve maximum possible change.

REPORTING THE IMPACT

The impact of integration of the infant reflexes and sensory integration is global because it changes the way the brain is functioning. It is therefore difficult to measure and apply statistical analysis.

The behavioural descriptors relate to the infant reflex integration activities used. There is a complex relationship between the reflexes, but each one has particular effects on behaviours.

One Example of an Infant Reflex

Figure 1 shows the main behavioural indicators that relate to the Asymmetrical Tonic Neck Reflex (ATNR). This reflex is initiated by the stimulus of turning the head to the side. The reflex response is a movement pattern affecting the limbs. The reflex relates to laterality and the limbs on one side of the body straighten and on the other side, they bend. Like many of the Infant reflexes, the stimulus is the head movement in a particular dimension that initiates an automatic reflex movement. If the reflex persists this will inhibit the development of conscious control, not only of physical movements, but affecting all areas of functioning. Corpus callosum development is affected, slowing processing. The BrainChild Program aids integration of the reflexes, thus enabling the brain to develop at higher levels of functioning.

ATNR persistence is often associated with persistence of the Symmetrical Tonic Neck Reflex (STNR).

This combination has a profound effect on vision, movement, memory, concentration, processing and impacts on activities in school, such as scanning, copying from a whiteboard (distance to near), sitting at a table to write and physical activities outside school – bike riding, swimming, ball skills, running and swinging a swing.



The Asymmetrical Tonic Neck Reflex

The Reflex	Indicators:
<ul style="list-style-type: none">• Develops: <i>in utero</i>, month 3.• Integration: 7th month of life.• Action: head turning to the side causes limbs to extend on the same side and flex on the opposite side.• Influence: Turning in the birth process. Development of muscle tone, language, hemispheric dominance, laterality. Symmetrical Tonic Neck Reflex (STNR) development.• High incidence in SEN pupils.	<p>Problems observed with:</p> <ul style="list-style-type: none">• Balance between focussed, narrow and peripheral vision• Memory processes• Expression of learned information• Managing emotional stress• Concentrated listening• Releasing emotions• Accessing information <p>The following may be present:</p> <ul style="list-style-type: none">• Dyslexia• Problems with reading• Problems with spelling and grammar• Speech development challenges

Figure 1 – The characteristics of the reflex response of the Asymmetrical Tonic Neck Reflex (ATNR) and some of the behavioural indicators relating to failure of the reflex to emerge or integrate.

This report is based on the observations of change made by the parents. They are the people who know the child the best and have observed the rates of development of and change in their child over the previous 7 to 15 years (the age range of the children taking part).

Many of the positive behavioural changes recorded have shown no previous improvement until the BrainChild Developmental Program© was introduced.

The parents' completion of the Observation of Behaviours Checklist provided a baseline. This was used to re-assess at the end of the program, six months later.

Although many of the children had similar diagnoses the expression of the diagnosis varied a great deal. As a result, each child had their own individual profile of behaviours and difficulties. However, there were many areas of similarity and these have been grouped under the following headings in each individual report and in the collated information:

- communication
- focus and attention
- social interaction and awareness
- anxiety, fears and obsessions
- aggression, hostility and impatience
- learning
- sensory
- health and physical impact

The positive change in these areas are shown in **Figure 3** (all groups) and **Figure 4** (groups 2 & 4) and summarised as percentages in **Figure 5** and **Figure 6**.

For more details please refer to the shortened individual reports where you can find the parents comments about the changes they have seen in their children since taking part in the BrainChild developmental program. They are in Appendix (page 22).

NOTE:

Case A, case D and case K are difficult to include in the analysis for the following reasons.

- Case A took part in few sessions and did not take part in practice at home. Although his mother attended many of the sessions and has the intention to do the program later, there is no participation to date.
- Case D took part in the first session and did not re-appear. Several phone messages were not returned and we have not been able to locate the family! It is thought that they have left the area. He has been omitted from the reporting.
- Case K was taken out of school into home schooling at the same time the BrainChild Developmental Program began. It is not possible to assess the impact of the program. He attended briefly and then his mother continued to learn the activities with his twin sister. He did not attend for re-assessment.

RESULTS

Issues Identified by Parents at Registration

As shown in Fig. 2:

The areas of concern related to all areas of functioning of the children:

- communication
- focus and attention
- social interaction and awareness
- anxiety, fears and obsessions
- aggression, hostility and impatience
- learning
- sensory
- health and physical impact

Of the stated behavioural issues at registration, 88% were reported by parents to have shown positive improvements.

The behavioural issues (aggression and communication for example) had not previously shown this level of change in a similar time period, despite treatment by specialists and therapists.

Of the 12% of the stated behavioural issues that showed no change, 1% may relate to behaviour management (Sleeping in mum's bed at night.) 1% relates to a congenital physical issue (scoliosis).

Generalised statements of *severe learning difficulties* were not included.

Fig. 2 . The Key Issues identified by the parents at registration by the parents/ carers. (19 cases) Reported positive change over the period of the program is written in purple.

<p>Male A – This case did not attend regularly and did no home practice.</p> <p>He was not re-assessed.</p> <p>Diagnosis: ASD & LD</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Acts young for his age 	<p>Male B - Diagnosis: Asperger's Syndrome</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Disorganisation <p>Difficulty:</p> <ul style="list-style-type: none"> • making decisions • expressing an opinion • saying why he is happy/sad/upset 	<p>Female C - Diagnosis: Asperger's.</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Lack of social skills • Will not speak to unfamiliar adults, but may use a pen and paper. • Biggest impact on our lives is the violent behaviour. It has a devastating effect on our family lives. • She is clumsy, unaware of knocking things off the side. • She does not cope well with unfamiliar surroundings and will run with no idea where she is running to or from. • Personal space and inappropriate touching is a big problem.
<p>Male E - Diagnosis: Asperger's Syndrome</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Social isolation • Inappropriate behaviour • high anxiety levels • explosive response to stress or provocation • lack of understanding of body language and cues • concerns about his long-term future. 	<p>Male F - Diagnosis: Classic Autism & CPLD</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Obsession with the same films (DVDs and videos) • Sleeping in mum's bed at night. • Aggression when he doesn't get his own way or if anyone says the word <i>no</i>. • His whole situation and personality. 	<p>Male G - Diagnosis: Classic Autism & CPLD</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Limited concentration in most activities • No spoken language. He uses PECS, hand pointing or leading to a place. Frustrated by communication limitations. • No sense of danger. Constant supervision when awake. • Walking is uncomfortable, he gets blisters on his feet.
<p>Male H - Diagnosis: ASD, ADHD, Focal complex epilepsy, Severe Learning difficulties</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Slow to learn <p>West Syndrome - High levels of medication to control seizures (up to 100 seizures per day un-medicated, as low as 2 per day on medication. Severe brain damage.)</p>	<p>Male I - Diagnosis: Cerebral Palsy, Learning Difficulties</p> <p>Key Issues:</p> <ul style="list-style-type: none"> • Lack of concentration • Poor anger control • Repeating daily routines • Repeating sentences 	<p>Female J - Diagnosis: Asperger's Syndrome</p> <p>Key Issues:</p> <p>No fear of strangers No sense of time/ danger Walks in front of mum/ poor space awareness Forgets what she is doing Self-help /bike riding difficulties Unexplained "absences" Disturbed sleep -screams in her sleep/bad dreams Bedwetting Panics Oversensitive hearing Concentration/ focusing problems Violent over trivial issues Obsessions can spark aggression Feet roll inwards Asthma Balance & coordination</p>

<p>Male K - Diagnosis: Asperger's Syndrome and Oppositional Defiant Disorder. Key Issues:</p> <ul style="list-style-type: none"> • Anger- the major difficulty • Aggression & hostility • Hates writing • No motivation to learn unless interest led. (his choice) • Limited concentration in school • Will not sit still in school • Controlling behaviour <p>It is difficult to determine change in this case. K started home education at the same time. Only partial attendance.</p>	<p>Male L - Diagnosis: Asperger's Syndrome Key Issues:</p> <ul style="list-style-type: none"> • Reading and school work • Obsessive talk. Loves ghosts & haunted houses. • He will walk alone in the playground talking to himself. <p>Good to improve:</p> <ul style="list-style-type: none"> • Communication. • Concentration • Listening • Following instructions. 	<p>Male M - Diagnosis: Dyspraxia & Dyslexia Key Issues:</p> <ul style="list-style-type: none"> • Balance & coordination • Poor ball skills • Reading, spelling • Speed of processing • Motor planning • Bumps into things & people • Self-help bike riding • Allergies – Asthma, dogs, hay fever • Fears – being in bed alone/needles
<p>Female N - Diagnosis: Dyslexia , Dyscalcula, Asperger diagnosis recently. Key Issues: 18/8/08</p> <ul style="list-style-type: none"> • Externalising emotions – hand contortions, jumping, bouncing, hugging. • Layers her fingers when excited. • Low muscle tone. • Tight hand grip-causes bruising! • Shuts herself off when distressed. • Problems descending stairs. One step at a time. • When she gets hot, she flops like a rag doll. • Reading, writing and maths. 	<p>Male O - Diagnosis: Asperger's Syndrome Key Issues: 5/7/08</p> <ul style="list-style-type: none"> • Concentration • Auditory processing • Organisation • Spelling • Mild aggression and hostility • Appropriate social interaction • Balance & coordination • Fine and gross motor skills • Hangs onto an adults hand when walking • Emotional outbursts • Impulsive behaviour • Difficulty stopping an activity (eg computers) 	<p>Male P - Diagnosis: Classic autism with CPLD. Key Issues:</p> <ul style="list-style-type: none"> • Communication is very limited • Anxiety • Violent towards himself and others • Challenging behaviours • He loves spinning, bouncing, climbing. • Very sensitive to high pitched sounds. • Becomes anxious very quickly. • When anxious he becomes more vocal and repeats words. He also hits himself under the chin with the back of his hand. This may also happen when he is excited. • In extreme cases he can become violent and will hit out at the nearest person. Mostly this happens in school. • He has an inward focus. Limited awareness of things around him.
<p>Male Q -Diagnosis: Classic autism & CPLD Key Issues:</p> <ul style="list-style-type: none"> • Severe Learning Difficulties • Communication • Socialisation • Imagination 	<p>Female R - Diagnosis: Kibuki Syndrome, scoliosis, ASD & LD Key Issues:</p> <ul style="list-style-type: none"> • severe learning difficulties • communication difficulties • very anxious at times resulting in outbursts of frustrated behaviour • physical difficulties due to scoliosis 	<p>Female S - Diagnosis: Kibuki Syndrome ASD & LD Key Issues:</p> <ul style="list-style-type: none"> • Lack of concentration • Inability to be independent for short periods • Need for attention 95% of the time • Lack of confidence • Aggressive • Phobias • Offensive behaviour • Organisation • Anxious • Emotional • Poor memory • Relating to her peers

The Observed Behaviours Record completed by parents prior to the start of the program provided a more detailed individual behavioural profile for each child.

The behaviours relate to the Key Infant Reflexes: Tonic Labyrinthine Reflex (TLR), Vestibular, Symmetrical Tonic Neck Reflex (STNR), Asymmetrical Tonic Neck Reflex (ATNR), The Moro Reflex, and the Spinal Galant & Spinal Pereze Reflexes. Other reflexes include three reflexes on the hands that affect writing and attitudes and ability to complete fine motor activities, the Parachute reflex that affects awareness of personal space and influences social development and the Babinski Reflex on the feet that affects gait.

Although no one profile was the same as any other, there were certain areas of similarity across the 16 cases. It is these similarities in behaviours causing difficulties for the children and families that are focused on in the presentation of group results.

The results for the most commonly occurring behaviours are shown in figure 3 for all groups and figure 4 for groups 2 & 4.

The behaviours listed vary slightly because the cases in groups 2 & 4 present with more severe difficulties CPLD (50%), SLD (25%), LD (25%) than the cases in groups 1 & 3 (predominantly Asperger's Syndrome diagnoses in mainstream schools). For example, the parents of children in groups 2 & 4 did not include **empathy** as a concern, as this was considered a high level skill not within their expectation when compared with the severe difficulties their children displayed at the initial assessment and as a result was not focussed upon.

The data shows a high proportion of behavioural issues that were reported by parents to have positive change. The results relating to the issues most frequently reported are shown below.

MOST FREQUENTLY REPORTED BEHAVIOURAL DESCRIPTORS(> 50% of cases)

The most frequently reported behavioural changes were:

Communication

- Following instructions (8 cases) 100% reported positive change
- Understanding (10 cases) 100% reported positive change
- Listening (9 cases) 100% reported positive change

Focus and attention

- Concentration (12 cases) 100% reported positive change
- Alertness (13 cases) 100% reported positive change
- Self organisation (14 cases) 93% reported positive change

Social interaction and awareness

- Choosing interaction (12 cases) 100% reported positive change
- Making choices and decisions (14 cases) 86% reported positive change
- Social isolation (9 cases) 100% reported positive change
- Personal space (11cases) 91% reported positive change

Anxiety, fears and obsessions

- Fears and Phobias (10 cases) 83% reported positive change
- Withdrawal/refusal/running away(8 cases) 100% reported positive change
- Repetitive/ obsessive (10 cases) 83% reported positive change
- Sleeping/ night terrors (9 cases) 90% reported positive change
- Coping with change (9 cases) 100% reported positive change

Aggression, hostility and impatience

- Perseverance (10 cases) 100% reported positive change
- Aggression (8 cases) 100% reported positive change
- Impatience / tantrums (12 cases) 100% reported positive change
- Violence / self harm (8 cases) 100% reported positive change
- Co-operation (10 cases) 100% reported positive change
- Response to stress (8 cases) 100% reported positive change

Learning

- Motivation (9 cases) 100% reported positive change
- Academic (12 cases) 100% reported positive change
- Reasoning, cause and effect (9 cases) 100% reported positive change
- Processing speed (10 cases) 90% reported positive change
- Fine motor (10 cases) 100% reported positive change

Sensory

- Hyperactivity (10 cases) 100% reported positive change

Health and physical impact

- Balance (12 cases) 100% reported positive change
- Co-ordination (14 cases) 100% reported positive change
- Ball skills/swimming/bike riding (15 cases) 100% reported positive change
(minimum of one aspect)
- Posture (9 cases) 100% reported positive change
- Toe walking/gait (8 cases) 100% reported positive change

The most frequently reported behavioural descriptors (> 50% of the 16 cases) were reported to have shown positive change of 97 % across the descriptors.

Parents also observed that their child was happier (10), calmer (14) and more creative (9). Many remarked on their child's increase in self confidence and self esteem. They also reported the enjoyment they had found in the sessions and the bonding effect with their child and their group.

Figure 3. All groups : Common areas of parental observation of positive behavioural change after the BrainChild Development Program

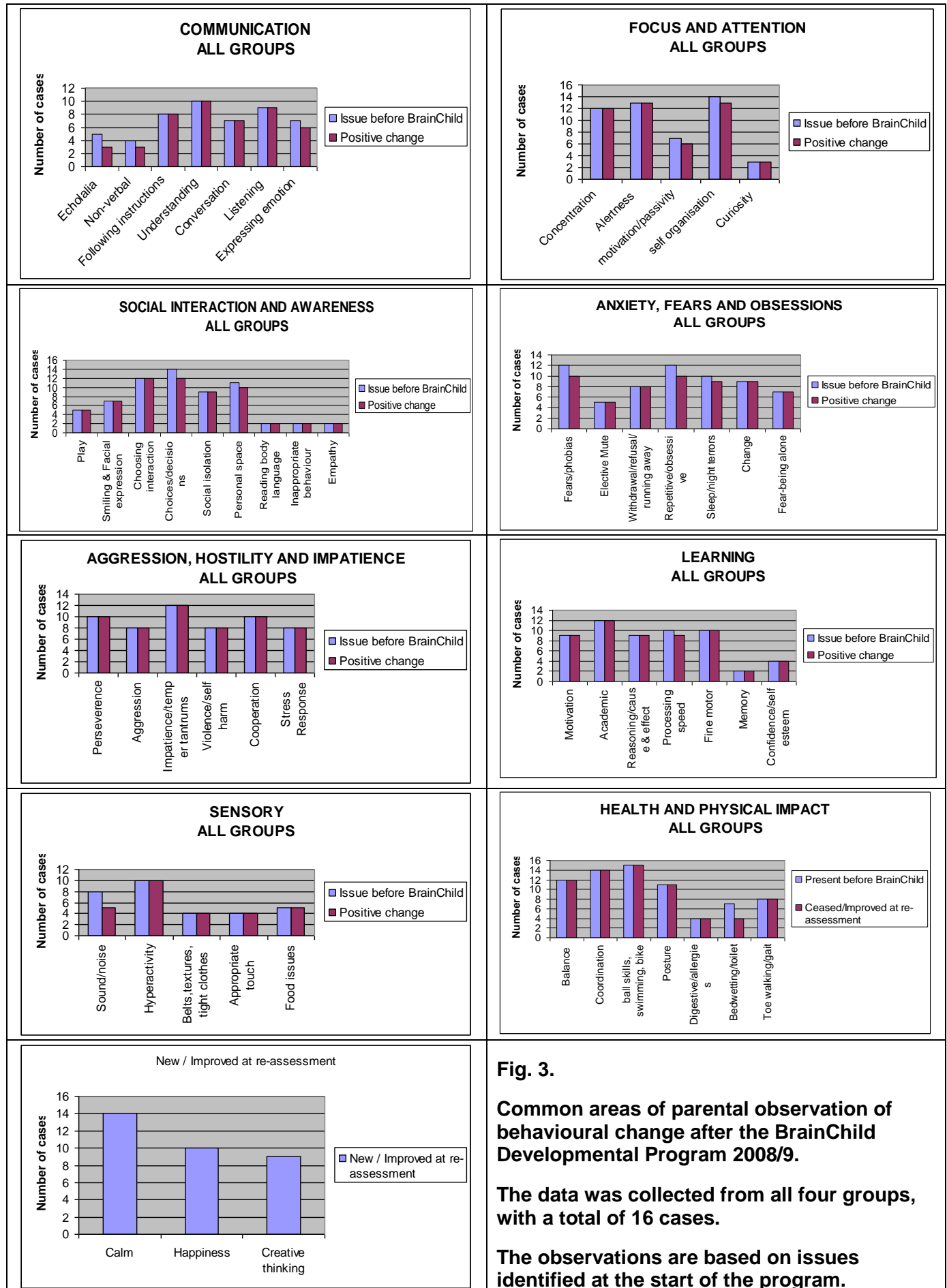


Fig. 3.
Common areas of parental observation of behavioural change after the BrainChild Developmental Program 2008/9.
 The data was collected from all four groups, with a total of 16 cases.
 The observations are based on issues identified at the start of the program.

Figure 4. Groups 2 & 4 : Common areas of parental observation of positive behavioural change after the BrainChild Development Program.

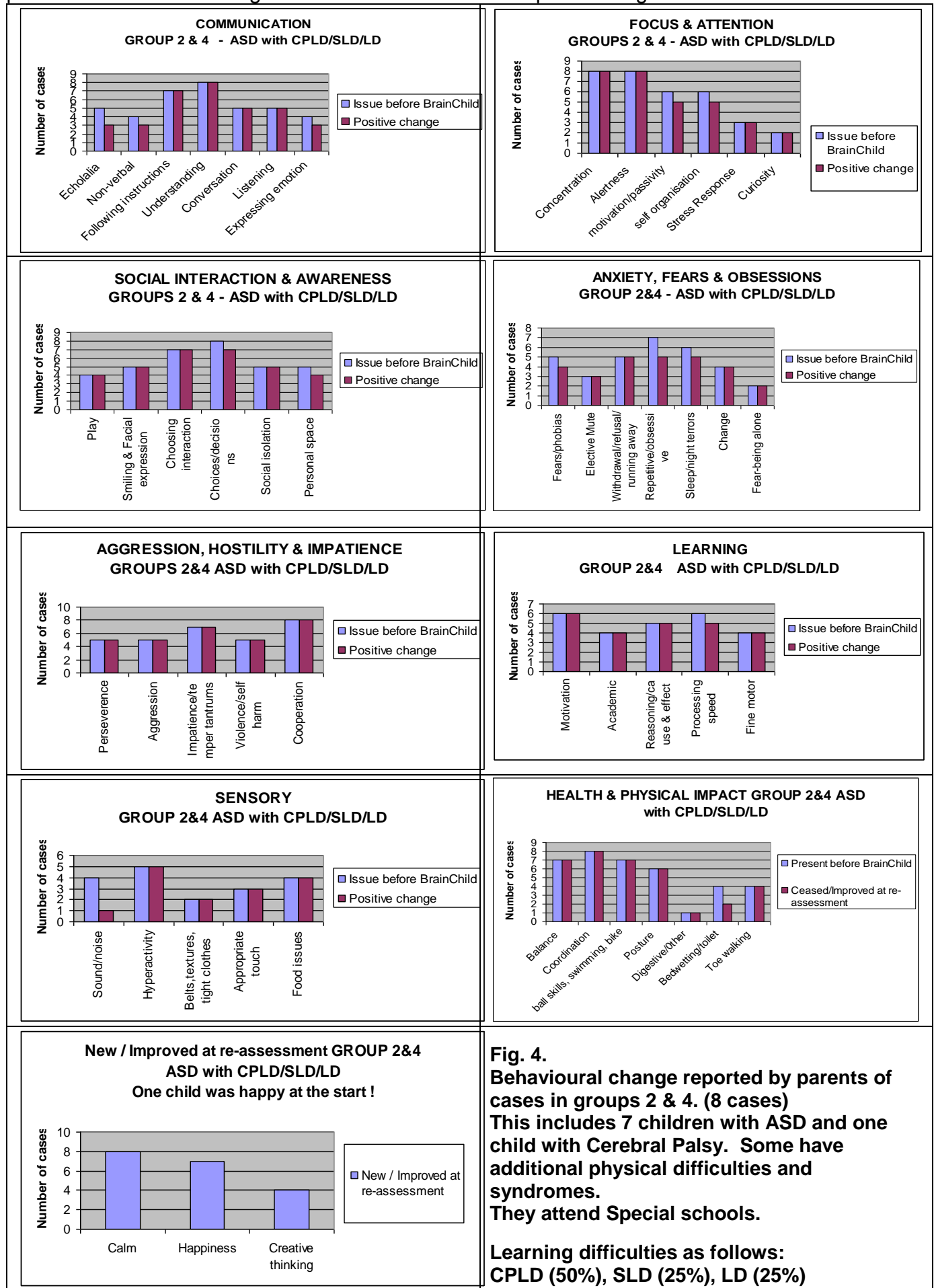


Fig. 4. Behavioural change reported by parents of cases in groups 2 & 4. (8 cases)
This includes 7 children with ASD and one child with Cerebral Palsy. Some have additional physical difficulties and syndromes. They attend Special schools.
Learning difficulties as follows:
CPLD (50%), SLD (25%), LD (25%)

Figure 5. All groups : Summary of percentage of cases reporting positive behavioural change for each behavioural descriptor.

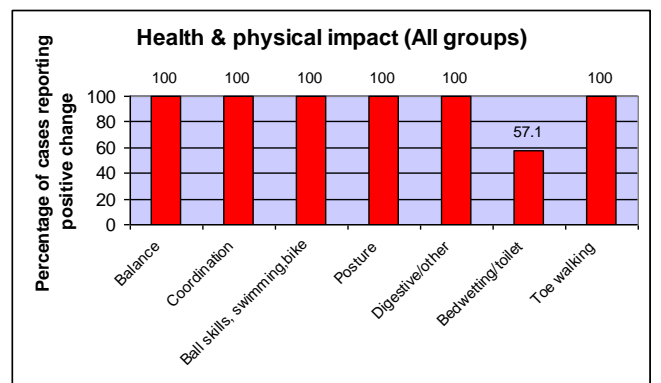
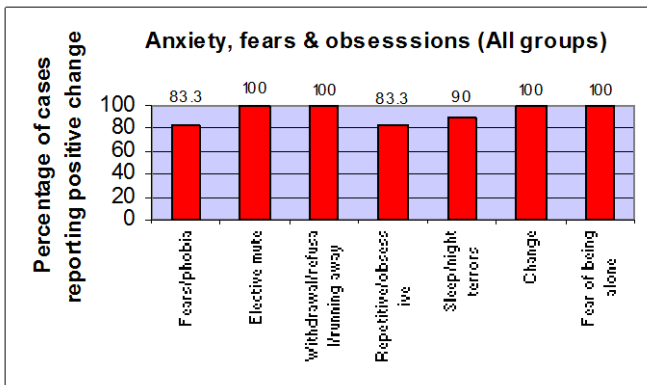
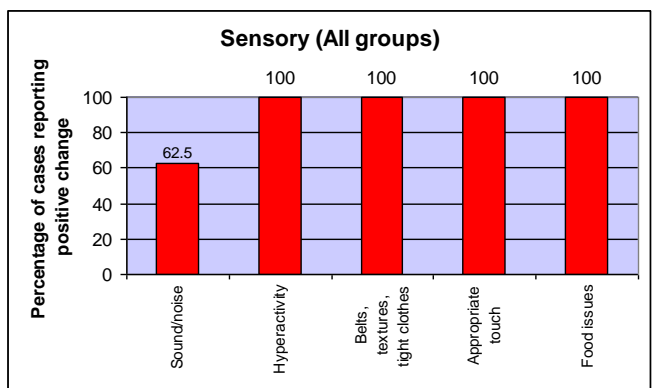
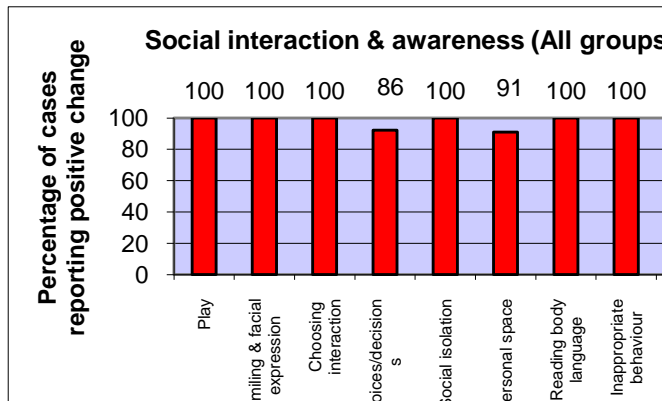
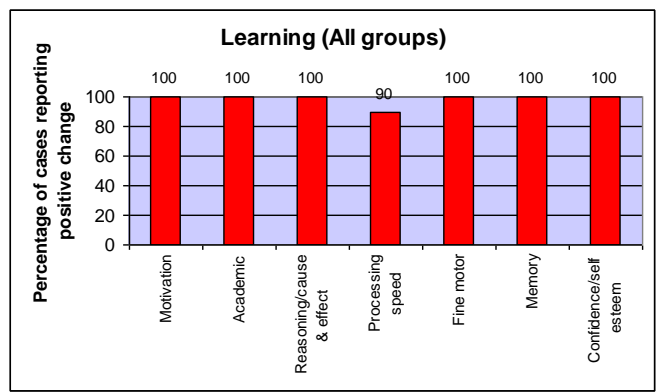
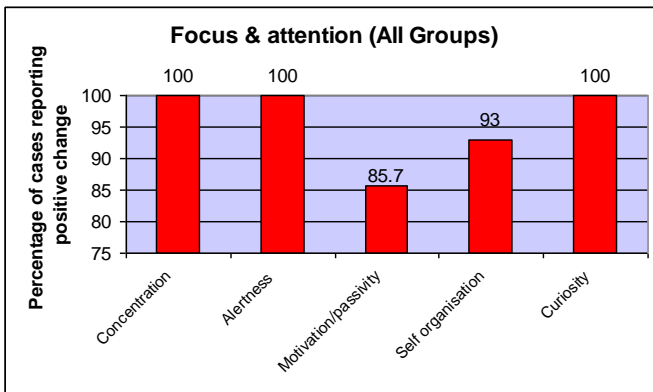
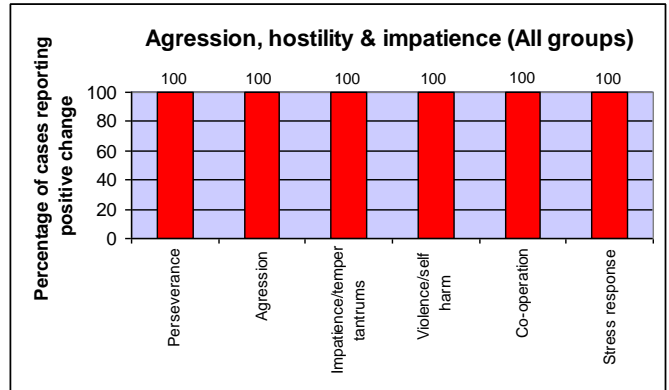
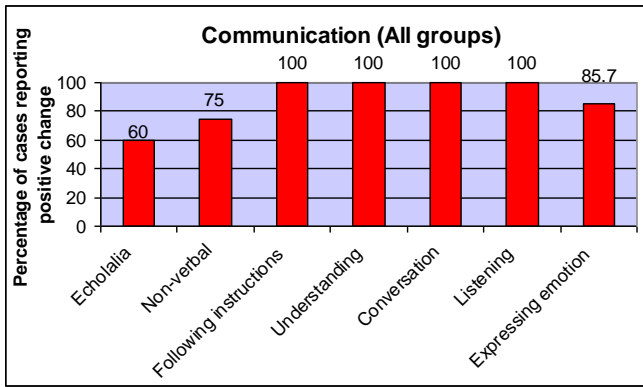


Figure 6. Groups 2 & 4 : Summary of percentage of cases reporting positive behavioural change for each behavioural descriptor

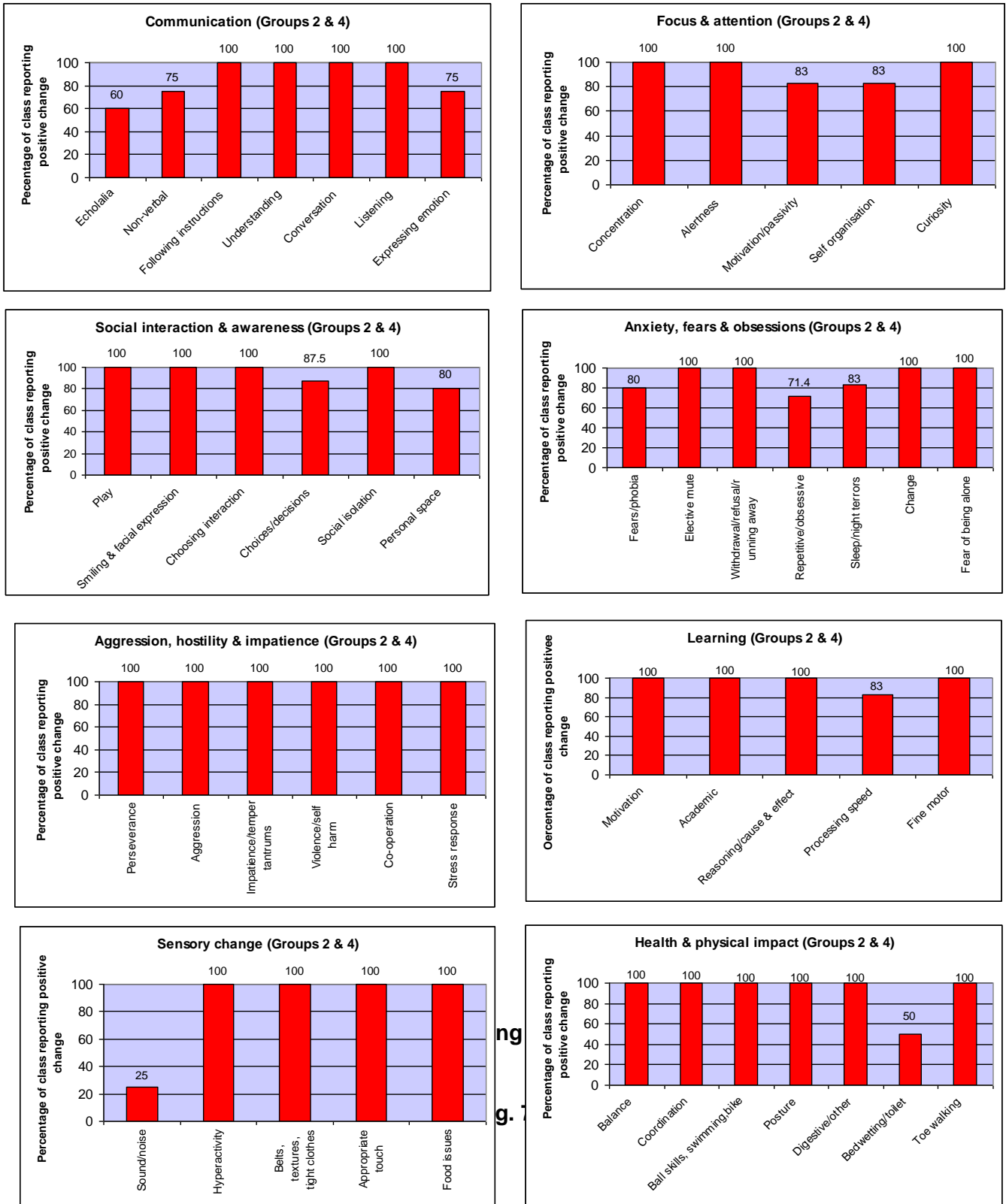
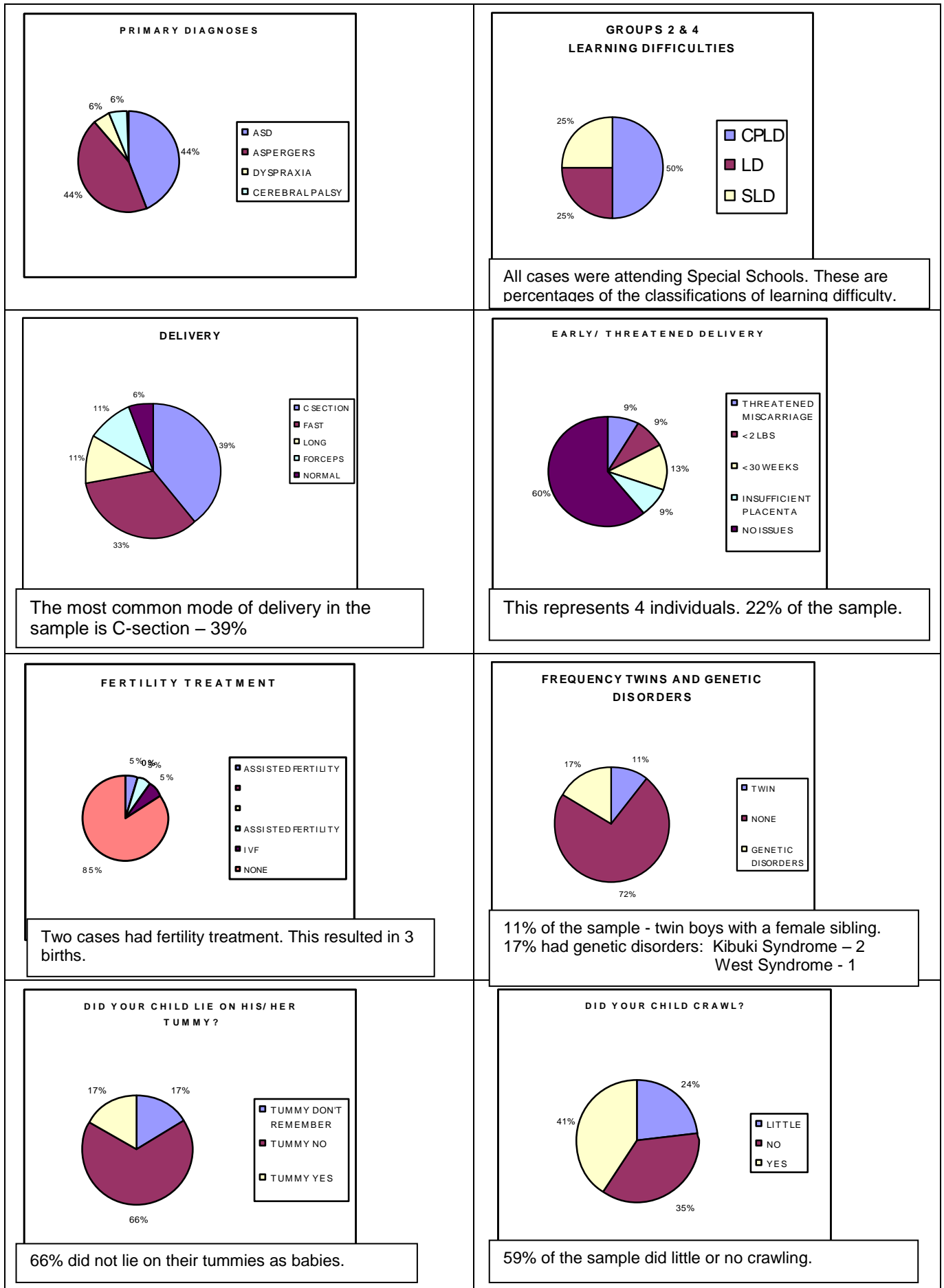


Figure 7 Some of the characteristics of the original sample (19 cases).



This suggests further research into the frequency of the following in relation to Autism and learning difficulties would be of value:

- C-section births
- Crawling – occurrence and time period
- Lying prone in the first year of life.

C-section births

Emergency C-section births may indicate infant reflex issues. If the reflexes have not emerged this may affect the birth process.

The reflexes are there to:

- Place the baby in the curled up, inverted position during pregnancy.
- assist the birth process, for example, by turning the baby and causing “wriggling” motions to progress the baby down the birth canal.

Elective C-section births deprive the baby of the passage down the birth canal and can prevent the maturation and integration of two infant reflexes on the back. The behaviours relating to this include enuresis (problems with bedwetting and urine control), attention issues, hyperactivity. **This is also true of fast last stage births.**

Lying prone in the first year of life.

If a baby does not lie prone regularly some of the reflexes will be adversely affected and persist. The crawling stage of development may be omitted. Many developmental skills can be affected.

Note: The development of the life-long postural reflexes that allow mature balance and co-ordination rely on the infant reflexes integrating first.

CONCLUSIONS

The percentages of positive changes in behaviours observed and reported by the parents of the children taking part in the BrainChild Developmental Programs over a period of six months are high.

The most consistent aspects for positive change recorded in a minimum of 50% of cases related to:

- 1. Aggression, hostility and impatience** - 100% of parents reported positive change for perseverance, aggression, impatience / tantrums, violence / self harm, co-operation, response to stress.
- 2. Communication** - 100% of parents reported positive change for following instructions, understanding and listening.
- 3. Health and physical impact** - 100% of parents reported positive change for balance, co-ordination, ball skills/swimming/bike riding, posture, toe walking/gait.

The other aspects were **focus and attention, social interaction and awareness, anxiety, fears and obsessions, learning and sensory.** All aspects had high levels of reported change.

In those cases where it was also possible to measure the key infant reflexes using physical testing at the baseline initial assessment, the infant reflexes have shown to be fully integrated or improved in all cases.

Although causal effect is difficult to prove, the changes occurred over the 6 month period while the BrainChild Developmental Program© was running. Many families saw changes in the first month.

In those cases where it was possible to also measure the key infant reflexes using physical testing at the baseline initial assessment, the infant reflexes have shown to be integrated or significantly reduced in most cases.

There are many infant reflexes and behaviours that collate easily, such as the spinal reflexes with urine control, the STNR with posture and ball / swimming skills and the reflexes on the hands with writing. There are many that are a result of a combination of reflexes, such as the Spinal reflexes with the Moro affecting attention and anxiety.

Some skills, such as riding a bike, are affected negatively by a group of persistent infant reflexes.

The functioning of the brain is complex and The BrainChild Developmental Programs acknowledge this. The individualised design of program three is based on detailed assessment information and addresses the whole reflex profile for maximum effect.

Many of the parents were hoping for one aspect of their child's functioning to improve. All saw some improvement in several aspects. The reflex integration that has been achieved will allow further maturation and learning to occur.

The effect of the integration

Children who have taken part in previous BrainChild Developmental Programs have continued to improve once the initial integration of infant reflexes has taken place. Integration of these primitive infant reflexes is the foundation for learning and life.

APPENDICES

This section provides examples of re-assessment reports and a sample of the feedback from each of the 16 cases.

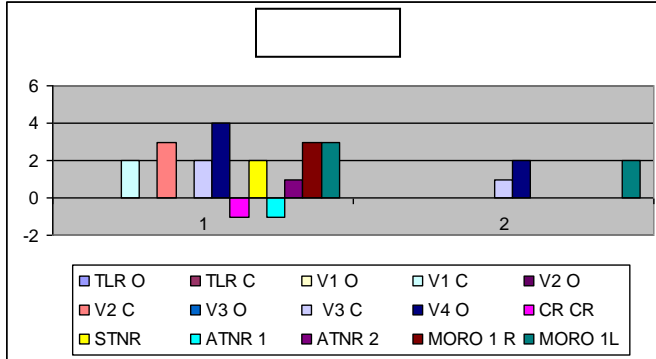
For more information about BrainChild,
visit the website:

www.brainchild.org.uk

APPENDIX 1. EXAMPLES OF A RE-ASSESSMENT REPORT FOR TWO OF THE CASES ARE SHOWN BELOW.



Surname Code case C
 Date of Birth: 22.3.1997 Age: 12 YEARS
 School attended:



NAS BARROW AND FURNESS GROUP BRAINCHILD DEVELOPMENTAL PROGRAM©

Diagnosis: statement applied for. Asperger's.

Key Issues:

The following were written by mum on the registration form.

- Lack of social skills
- Will not speak to unfamiliar adults, but may use a pen and paper.
- Biggest impact on our lives is the violent behaviour. It has a devastating effect on our family lives.
- She is clumsy, unaware of knocking things off the side.
- She does not cope well with unfamiliar surroundings and will run with no idea where she is running to or from.
- Personal space and inappropriate touching is a big problem.

Group 1 , September 2008

Mum took part with C in the sessions of the program. They played the activities regularly at home and enjoyed them.

The Reflex Assessment

The reflex assessment involves activities on the floor, standing and walking from one point to another. A total of 16 reflexes are assessed.

The un-emerged / un-integrated key infant reflexes are shown with values above zero. A value of 3 or 4 indicates significant issues.

1 represents the initial assessment. 2 represents the re-assessment

The Vestibular tests relate to balance and co-ordination and show mixed values between 0 and 4. High scores indicate difficulty with balance when she closes her eyes. This indicates vestibular issues, particularly relating to proprioceptive feedback.

C was fearful and in the initial assessment, many tests were not attempted. These are shown as -1, but can be considered to indicate 4. (STNR related crawling and ATNR)

Changes in the infant reflexes

TLR, Spinal, ATNR, STNR, are now integrated, Moro and some Vestibular values have reduced. These are key reflexes affecting a wide range of behaviours including learning and anxiety.

Continuation of Tactile, Hand Supporting and Moro have been recommended. Excellent progress. After the first few sessions C was keen to do daily practice. Mum and C have worked hard to achieve this result.

Key Points from case history

Initial assessment – When C arrived she refused to leave the car and lay curled up in ball. We agreed that she should stay there until she was ready. After about 40 mins, I went out with mum and C came inside with us. She spent much of the time clinging to mum, curled up and anxious. She understood instructions and complied with persuasion and a bit of trickery! She did gradually respond to my requests and answered me while looking at mum. Mum was pleased with her response at this stage.

At re-assessment she cooperated and complied and smiled. She no longer needed to sit on her mom, curled up. She talked to me about her friendships at school and how she felt. She was used to me and had visited once before, but mum confirmed that the change in behaviour was typical of the change in her level of anxiety.

- Family members – sister and Nana have dyslexia. Mom's grandmother is a recluse (like C.)
- IVF. The early stages of a new method. Pregnancy was fine.

- A fast birth. Delivery caused a torn uterus. Briefly cuddled C after birth, but the baby was cold and taken away. Mom was ill in hospital for three weeks. When at first they took the baby away, mum was disorientated.
- Breast-fed. Didn't sleep much. Didn't like to be alone. Wanted to be in a papoose facing outwards, needed to be nursed to sleep upright. Didn't like lying down.
- Early neck strength. No crawling. She sat and stood up and walked. No practice.
- She wanted to be upright looking out. Rarely lay on her back or front.
- Some difficulties with self help skills such as socks and knife and fork. Often she could not be bothered.
- Occasional bedwetting.
- Travel sickness.
- Doesn't like loud noises. They make her jump.
- She is sometimes clumsy.
- She is aggressive to her mom and sister.
- She has many fears and worries- eg. dogs & darkness.
- She achieves well at school although her creative ideas are limited.
- Has never slept through the night.

Behavioural changes:....Mum reports through emails:

- *When we first started doing the exercises within the first week, I had four nights of unbroken sleep, which has never happened in 11 years. You dont know what it means to get a few nights unbroken sleep.*
- *Last week she went to the local park on her own which is a huge milestone for her. She never goes out alone she is quite fearfull of something happening to her. Although I talked with her on her mobile she was still out on her own.*
- *She has also started to be a bit more talkative to adults just a little bit if I am there and prompt her. I feel as though these are huge mile stones for C to accomplish in such a short time of doing the activities.*
- *She has also been more tactile with me asking for kisses. Over the years I have become wary of kisses as she would spit in your face but she hasnt been doing it.*
- *.....When we had finished talking I asked her if she wanted a cuddle, she said she did not need one but she would give me one if I wanted one. Which I felt that again is a huge step for her to understand that I would get something out of a cuddle!*

Behavioural changes:....Mum reports at the re-assessment session:

Communication

- Communication has improved. It is much better. She doesn't get frustrated like she used to. She's calmer.
- She talks about things now instead off saying a couple of words then hitting and running away.
- Her range of facial expression is greater. She smiles and laughs more.
- She is much happier. (smiling lots!)
- You can have a better conversation with her now. She won't just go on about what she wants to. I can ask her to give me five minutes to speak to her and she will listen. Before she didn't listen to me and she just continued talking. This is a very big communication issue.
- She will say to me now, "I'm losing it a bit mum - can you squeeze me. "

Focus, Attention

- Self organization is better. She has less problems with school, tidies and organizes her bag each night and is more self-directed.
- She is more self-aware and will ask mum to do tactile therapy.
- She will help herself, using tapping or the hedgehog.

Social interaction and awareness

- She is better in transition, is not so shy, and no longer asks not to be left with strangers or left alone. She would not do anything or go anywhere alone when she started the program.
- Improvements in being socially isolated and withdrawn.
- She is not inappropriately touchy/ feely now.
- She doesn't invade personal space.

Anxiety, fears, obsessions

- Her response to emotional stress is now within the norm. She's calmer.
- Her dislike of change and embarrassment in social situations have improved.
- She is better at making choices.
- She overreacts less, is less hyperactive in her behaviour, emotions and is less sensitive physically and emotionally.
- Her tolerance of stress has improved. She lashes out or loses control and uses violent and abusive language much much less.
- She used to be constantly asking what she was going to do next, what she was going to do tomorrow. She no longer does this. The anxiety has gone.
- She has less fear and deals with it better.
- The following have improved: panicking, feeling of overwhelm, shyness, being clingy, unable to demonstrate affection, fear of new or unfamiliar situations, being socially isolated and withdrawn. (Relating to the integration of the Moro reflex).
- She talks about things now instead of saying a couple of words then hitting and running away.
- She is much happier. (smiling lots!)
- She is less disorganized and forgetful, better arriving on time with the right equipment and less likely to make silly mistakes.
- She does not stare blankly anymore.
- She is less easily distracted and perseveres

Aggression, hostility, impatience

- Her aggressive and hostile attitude has reduced. It is still there but much better. She expresses her emotions more effectively. When she has outbursts they don't last as long.
- The violence is definitely better.
- She talks about things now instead of saying a couple of words then hitting and running away.
- She's just not as hard to manage now.

Learning

- Handwriting has improved. She is able to express her ideas on paper more effectively. She can write more and for longer and is happier with it.
- Her abstract reasoning skills are a lot better.
- Her creative thinking has improved.
- Task breakdown and development have all improved.
- She can now reason with cause and effect but is not always able to be open to discussion.
- Time and space perception is no longer a problem.
- She is less disorganized and forgetful, better arriving on time with the right equipment and less likely to make silly mistakes.
- She is less easily distracted and perseveres.
- She can now receive external information more easily.

Sensory

- Most hyper-sensitivities are better. Her sensitivity to smell is still present – disinfectant / hospitals.

Health/physical impact

- Her balance has improved, as have her ball throwing and catching skills, and she is no longer clumsy when reaching for objects.
- She falls over much less. In fact, that's fine now.
- Motor planning, coordination, task breakdown and development have all improved
- Her posture is now upright. She used to squirm about on the floor. This is unusual now.
- Bedwetting is fine now. She no longer dislikes tight clothes and belts
- Her fluctuating blood sugar levels are now stable.
- She is not so often tired. She no longer has cycles of hyperactivity and fatigue.
- She sleeps through the night. That came within the first week of the BrainChild Program.
- Her walking is in line, with even heel strike.
- No longer suffers motion sickness.
- I've seen some maturity.

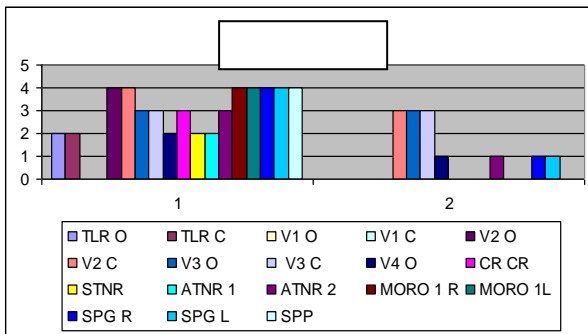
Additional comments

Mum reports: Our relationship was not in a good place..... now the whole family is much happier. The changes in C have made a big difference to them all.

C smiles a lot more now...and I smile a lot more

CODE CASE J

Date of Birth 01/01/2001 Age 7 YEARS
School attended



NAS BARROW AND FURNESS GROUPS BRAINCHILD DEVELOPMENTAL PROGRAM©

Diagnosis: Asperger's Syndrome

Key Issues: 17/6/08

The following were written by mum on the registration form.

No fear of strangers

No sense of time/ danger

Walks in front of mum/ poor space awareness

Forgets what she is doing

Self-help /bike riding difficulties

Unexplained "absences"

Disturbed sleep -screams in her sleep/bad dreams

Bedwetting

Panics

Oversensitive hearing

Concentration/ focusing problems

Violent over trivial issues

Obsessions can spark aggression

Feet roll inwards

Asthma

Balance & coordination

Group 3

Mum and J took part in all sessions of the program. They played the activities regularly at home and enjoyed them.

The Reflex Assessment

The reflex assessment involves activities on the floor, standing and walking from one point to another. A total of 16 reflexes were assessed.

The un-emerged / un-integrated key infant reflexes are shown with values above zero. A value of 4 indicates significant issues.

1 represents the initial assessment. 2 represents the re-assessment.

Changes in the infant reflexes

TLR, STNR, Moro are integrated, ATNR, Spinal and some Vestibular values have reduced. These are key reflexes affecting a wide range of behaviours including learning and anxiety.

Robinson Grasp, Babkin Palmmental and Hands Pulling reflexes are now integrated. These relate to fine motor movement and influence writing and attitudes to fine movement activities.

The Hand supporting reflex is now integrated. This relates to awareness of personal space.

Continuation of ATNR, Spinal, Babinski reflex integrations have been recommended.

Key Points from case history

- Reflux prevented her lying on her tummy.
- J's father and cousin have diagnoses of Aspergers.
- A stressful pregnancy. Almost lost her at 28 weeks. She was lying transversely.
- Emergency C-section was suggested but not required. Very rapid birth.
- No/weak sucking reflex. Transferred to a bottle, although the other siblings had been breast-fed.
- Rolled over 25 weeks. Crawled 45 weeks.
- Lay prone rarely because of reflux up to eight months.
- Difficulty with self-help activities especially fine motor.
- Asthma.
- Bedwetting regularly 3/7 nights. Sleeping difficulties with night terrors.
- Can ride a bicycle in a straight line only.

Behavioural changes:....Mum reports:

Communication

- She listens better to other people if she has their attention. She can be over focused and will not hear mum speaking to her.
- She can vocalize her feelings.
- Still talks a lot, but now stops, listens and responds.

Focus, Attention

- She perseveres more.
- She is less disorganized and not so easily confused.
- She is more appropriately focused and less easily distracted in class.
- Over focus on details and a narrow view of the world is improving.
- She daydreams less and appears less vague.
- More able to sort the unnecessary from the important.
- More able to remain still.

Social interaction and awareness

- She has good interaction with friends. However they must play her game. She will sometimes isolate herself and enjoys sitting and watching others playing.
- She still has no stranger danger awareness although she can understand the theory and answer all the questions correctly!

Anxiety, fears, obsessions

- No longer screams out at night or has nightmares. Sleeps well.
- At school she is more confident, volunteering to do jobs and will now show her work in class.
- She can vocalize her feelings. More stable emotions, behaviour, response to change, allergies, better creative thinking.
- She has come out of her shell, especially in the BrainChild sessions.
- She's able to use tapping and breathing to become calm, when she is upset.
- Coping better with small changes.
- Reduced fears of open stairs and heights.
- She is less emotional. More even.
- Fear of change, irrational emotional relationships have improved.
- Asthma has improved.
- She is more adaptable.
- She finds it easier to make decisions.
- Some improvements in her tolerance to stress.
- She is less clingy.
- She is less likely to be socially embarrassed.
- She is much more likely to feel comfortable in a situation and be prepared to talk.

Aggression, hostility, impatience

- She is still sometimes violent but not as often or over such trivial issues. She will kick if she doesn't want to do something.
- She is not so easily frustrated with herself.
- She overreacts less often.
- She conforms to rules except mums sometimes.
- She has fewer temper tantrums when she doesn't get her own way.
- Less aggression when something goes wrong or she can have a certain thing.

Learning

- Less likely to make silly mistakes.
- Spatial setting out and organisation on the page has improved.
- Concentration and comprehension has improved with maths and reading.
- More able to remain still.
- Gives up less easily.

Sensory

- hypersensitivity to sound has shown slight improvement.

Health/physical impact

- J is sleeping better. She was bedwetting three times a week. She stopped this early in the BrainChild program and now sleeps all night. The night terrors have stopped.
- As she walks down the street she no longer walks in front of mum. She stays in her own space.
- Her balance and co-ordination has improved. She is much better on the climbing frame. Doing well with ball skills, jumping and skipping.
- More fluidity of movement.
- More able to be still.
- Reduced fears of open stairs.
- Better spatial awareness, less clumsy.
- No longer rolling in on shoes. They are wearing evenly.
- Her stamina has improved.
- She is ill off school much less.
- Her digestive problems are fine now.
- Will try new foods.
- She is not such a messy eater.
- Spatial and directional awareness has improved. Less easily disorientated.
- Improved coordination of sequential movements.

Mum's quote:

Several months ago, her teacher said that she was now volunteering in class to show her work or read a story, whereas before she wouldn't do any of that. They've noticed quite a difference in her.

APPENDIX 2. TWO EXAMPLES OF A FEEDBACK REPORT HALF WAY THROUGH THE PROGRAM:

- 1. one of the group 4 cases (case P)**
- 2. one of the group 2 cases (case I)**

1. one of the group 4 cases (case P)

Hello everyone,

It would be really helpful if you could write about your child and any changes you have noticed so far. Write as much or as little as you like. The following headings might be helpful, but if you want to ignore them and write your own version that's absolutely fine.....
Thanks, Viv.

- Your thoughts about the BrainChild Program. What do you like about BrainChild sessions? What does your child like?

The BrainChild Program has provided a very helpful and enjoyable series of sessions that have had very positive effects on our child's development. The sessions have been fun for both parents and children. The program has helped us to understand the difficulties our son has and shown us how we can help him. The sessions have also provided a social activity for him to attend that has helped him to develop his social interaction and communication skills with another group of people. They have also allowed us to build relationships with other families that understand the difficulties involved in having a child with a disability. He obviously enjoys the activities and exercises especially the more physical and those that involve massage.

- A brief outline about family life before BrainChild. (Maybe, your experiences with statementing, school, OT'S, Speech therapists and Physios....and support generally.)

P is a twin and was diagnosed with classic Kanners autism & complex learning difficulties when he was 3. Before BrainChild, he had very disturbed sleep patterns, often waking for many hours during the night, he refused to leave the car when visiting new places and could be very challenging and aggressive. He had severe anxieties especially with water, refusing to even sit in the bath, he would not tolerate hair & nail cutting and would only eat a narrow range of foods. This disability has had a very detrimental effect on every aspect of family life and there is no support given to the child with Autism or the family and no advice or information is provided as to services or therapies that may help. Parents can not access services from any Physio or Occupational Therapists because children with autism do not meet the service criteria and there are no specialist Autism Speech Therapists in the area.

- Why did you start BrainChild? (You could mention the difficulties and concerns before starting BrainChild.)

We started BrainChild because after attending a training day I realised the program had the potential to help my son. We had heard positive things about the program and were ready to try anything to help his development and improve his quality of life. Our main concerns were his increasing anxieties and frustration which were leading to more violent behaviour, poor communication and interaction skills and his worsening sleep pattern. Much of his language consisted of echolalia which became more obvious when he became upset and anxious.

- What changes have you noticed and have they changed your child's life in any way? Have they affected YOUR life in any way?

He is very much calmer. He sleeps more soundly and for much longer, which means he is more relaxed in the mornings and getting him ready for school is much easier. He is less anxious about trying certain activities and is now enjoying water based activities and will sit in the bath and take a shower. He is beginning to use more appropriate language and can follow directions more easily and he now seeks out interaction more often with family members. He is much calmer and co-operative overall and more willing to try new activities and foods rather than refusing to even try. All these improvements have helped make life easier for the whole family.

- What achievements are you most happy about? Did you expect them?

I am happy about all the achievements and I did not expect such dramatic changes in such a short time, but the sleeping is the biggest achievement as now that he sleeps for longer, we can sleep for longer, making us more relaxed and able to cope during the day. This has had a big impact on the whole family. He is a much calmer child and more able to cope with new routines and changes. His fear of water has also subsided, he will sit in the bath and take a shower and now enjoys going to the swimming pool, something we have struggled with for many years. This has made our recent holiday much more enjoyable.

- Have you noticed any changes in the relationship with your child?

Yes, he is much more relaxed most of the time, at home and at school and his behaviour is becoming more predictable, that makes us all more relaxed and calmer with him, instead of being on edge and worrying about his unpredictable aggressiveness. We are now more optimistic and more willing to try new activities with him.

- Have you made any adjustments in the way you manage your child? How has this changed things?

Yes, we are much more relaxed in our approach to him and we know we can calm and distract him more easily, preventing an escalation of unwanted behaviours. He is much more likely to co-operate with these activities and enjoys the massage techniques, responding and calming almost immediately.

- A last thought from you

There is very little available to help support children and families affected by autism. I think there should be more opportunities to access alternative approaches and therapies locally in order to help a child's development and improve the quality of life for the whole family.

2. one of the group 2 cases (case I)

Hello everyone,

It would be really helpful if you could write about your child and any changes you have noticed so far. Write as much or as little as you like. The following headings might be helpful, but if you want to ignore them and write your own version that's absolutely fine.....

Thanks, Viv.

- Your thoughts about the BrainChild Program. What do you like about BrainChild sessions? What does your child like?

I think every special need child should be able to have the chance of a Brain Child program The sessions on a one to one was the best for my child . He loves doing the exercises and wont let me forget tactile before bed its now his routine.

- A brief outline about family life before BrainChild. (Maybe, your experiences with statementing, school, OT'S, Speech therapists and Physios....and support generally.)

Before Brain Child He was ticking along loves his school and was settled but seemed to be stuck in a little rut .. thriving slowly

- Why did you start BrainChild? (You could mention the difficulties and concerns before starting BrainChild.)

When we heard about Brain Child it seemed too good to be true ..but with special need kids you try anything.... before Brain Child we were worried about his speech it was a lot of babbling going on ..and at night time he would be up for hours and not go to sleep.

- What changes have you noticed and have they changed your child's life in any way? Have they affected YOUR life in any way?

A big dramatic change has happened for him and the family .. He is talking much much better , he sleeps better goes of to sleep really quickly now..and he seems to be thriving in all directions at school at a quick pace. he is now spelling out letters and sounds and eager to learn something new every day and is willing to try without feeling pressured . Its improved all our lives .

- What achievements are you most happy about? Did you expect them?

Every achievement is a bonus but especially his talking as he is less frustrated now that people understand him better . we never expected such big improvements

- Have you noticed any changes in the relationship with your child?

He's always been a loving child but now he seems to be more mature and independent and our relationship is on a different level now he is not as needy for his mum anymore which is a good thing as it is what every child should be doing at the age of eight .. and we are still very close .

- Have you made any adjustments in the way you manage your child? How has this changed things?
- A last thought from you

Just a big thank you to viv she is a very dedicated person whom all the kids love thankyou

APPENDIX 3. INFORMATION REPORTED BY PARENTS/ CARERS TAKEN FROM THE INDIVIDUAL POST - BRAINCHILD REPORTS:

Case A

Non-attendance

Case B – aged 12 years, Asperger's

Just a few of the changes:

- There are more tears as he begins to release his emotions more easily.
- He is more able to talk about sadness and other emotions. There is more response and he may cry.
- He is writing more steadily and more easily.
- His handwriting has improved.
- There is less resistance to doing homework.
- The layout of his work has improved.
- Getting thoughts into words and onto the page is easier. That's the biggest improvement.
- He just seems to do his homework, and I don't get involved. He just says, "I've done it."
- His whole processing, the creating of ideas and the actual writing. That's got much smoother.
- He used to vomit easily and often have constipation or diarrhoea. None of these have been evident in the last six months.
- Balance and co-ordination has improved.
- His organisation has improved, with no lost property this year. This is a big difference.
- He has matured definitely over the last 6 months. He's been surprising me with the improvements in maturity.

Quote from mum:

He enjoyed coming and he was sad that the sessions had finished. He liked the time and the attention and interaction. He liked the hands on nature. I think going back to tactile relationships is quite nice for them.

Case C – aged 12 years, Asperger's

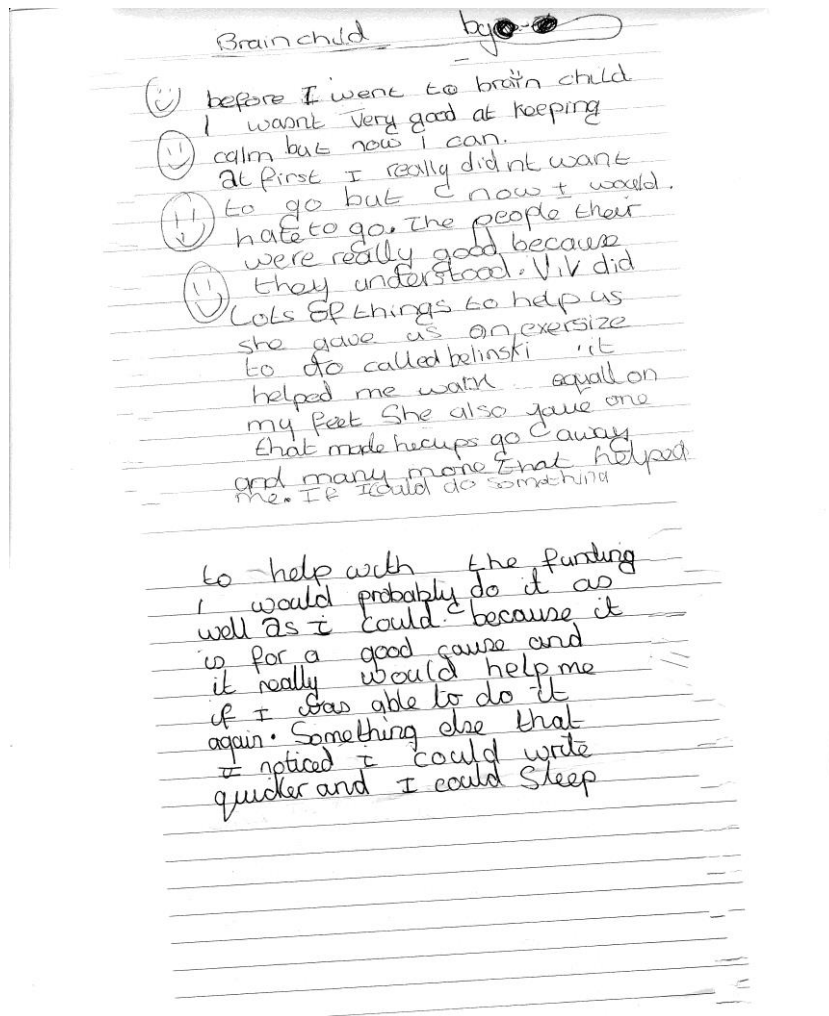
Emails from mum in the first few weeks of the program:

- When we first started doing the exercises within the first week, I had four nights of unbroken sleep, which has never happened in 11 years. You don't know what it means to get a few nights unbroken sleep.
- Last week she went to the local park on her own which is a huge milestone for her. She never goes out alone she is quite fearful of something happening to her. Although I talked with her on her mobile she was still out on her own.
- She has also started to be a bit more talkative to adults just a little bit if I am there and prompt her. I feel as though these are huge milestones for C to accomplish in such a short time of doing the activities.
- She has also been more tactile with me asking for kisses. Over the years I have become wary of kisses as she would spit in your face but she hasn't been doing it.
- *Talking about something sad.....*When we had finished talking I asked her if she wanted a cuddle, she said she did not need one but she would give me one if I wanted one. Which I felt that again is a huge step for her to understand that I would get something out of a cuddle!

C also wrote the following letter to me (Viv Hailwood). It is a wonderful mix of the important and not so important. I love the happy faces. She has begun to smile and laugh.

Mum reports: Our relationship was not in a good place..... now the whole family is much happier. The changes in C have made a big difference to us all.

C smiles a lot more now...and I smile a lot more.



Note...

In the letter she states:
.....At first I really didn't want to go but now I would hate to go.....

She assured me that she means that she doesn't want the sessions to stop.

Viv Hailwood

Case D

Left the area – not included.

Case E – aged 15 years, Asperger's, (achieving well in school, particularly science.)

Just a few of the changes:

- He is more aware of people's personal space, no longer being too close.
- E reports that he is more able to read other people's body language.
- He is less socially isolated.
- E considers he has plenty of friends.
- His inappropriate behaviour is much less, he has a lot more awareness now.
- He no longer clenches his fists with his elbows pressed against his body, very tense. This has gone.
- His facial expression has improved. He can now show a wide range of emotion. Mum thinks this may have improved through drama. (But maybe STNR integration is the contributor!)
- His emotions are settling down - there is a lot less melt down, hysterics, instant flare-ups and crying. He is much calmer.
- Low tolerance to stress has improved.
- Nightmares and nights terrors have all improved.
- Even though he has been completing his GCSE exams, his anxiety levels have been within the norm as far as can be judged.

- Recently, he no longer “beats himself up” verbally or physically.
- When he is frustrated, he keeps on trying.
- Out bursts are no longer caused by small triggers.
- He no longer appears violent or uses abusive language.
- Aggressive behaviour due to frustration and confusion is less.
- Handwriting is slightly better.
- His use of capital letters is better, but not yet reliably correct.
- He is now planning what he needs to do.
- He fidgets less - for example in a choir concert.
- His bike handling skills are definitely better. A distinct improvement.
- His posture is definitely improved, no rounded or slumped shoulders now, standing and sitting.
- His running has more fluidity. He used to run with his arms dangling behind him. His running is now more typical with the opposition of his arms.
- His asthma is much better since before Christmas (less than half way through the program.)
- He always wore the same clothes regardless of the weather. He now removes his jumper appropriately.

Quote from mum: I am much happier about his long-term future.

Case F – aged 10 years, ASD, CPLD

Just a few of the changes:

- He is motivated to learn. This makes a big difference.
- At school and at home he wants to read a book, pointing to words, using flashcards to make sentences and has started reading the Oxford Reading Tree books.
- He is much calmer, less emotional, less hyperactive, with more appropriate behaviour.
- He is no longer afraid of heights. He enjoys walking along a wall now. He likes jumping off rocks or off a wall. He is able to manage limestone pavements and will play follow the leader and be more adventurous. He will even try climbing trees.
- He no longer holds his breath.
- He no longer becomes fatigued. He used to complain of being tired and want to lie down or sit.
- He is no longer toe walking.
- He will now approach people to communicate. He is less likely to isolate himself and escape into his own world.
- School have reported that he is less easily distracted in the classroom. He can direct his attention for up to 20 minutes now. He is involved in more productions and activities etc.
- He seems more aware of the world around him and is noticing more.

Quote from mum: At first I didn't realize the impact that the infant reflexes have on a child's development and that you can get improvements in so many areas of their life by doing the specific exercises. It's a holistic approach, which is what parents and carers need.

Case G – aged 7 years ASD, CPLD

Just a few of the changes:

- His understanding is much better.
- He will now go and get things when asked.
- He has a more outward view of life.
- He is much nosier and wants to investigate more.
- He approaches people to communicate. He used to just sit. Now he moves around more and wants to come and communicate. He wants to join in with the family.
- I can reason with him.
- There is a lot more cooperation. When I ask him to do something he doesn't react negatively or moan. When I say it's time to go home, he will just get up and go without a fuss. He used to throw himself on the floor, cry, refused to cooperate physically and moan.

- Family life is much better because he is calm and more co-operative. He is a lot happier in himself. He can accept things more easily.
- Another parent commented: He is much calmer and more accepting. He is more interested in the other children now and taking part a lot more. He is far more cooperative and has a sense of humour. There is much more awareness - for example, he now looks at mum to see if he can do something.

Quote from mum: The program has made home life a lot more pleasant for all my family and my son.

Case H – aged 7 years ASD, ADHD, Focal complex epilepsy, SLD

Just a few of the changes:

- No communication originally.
- Now he will respond to instructions, go and get things and cooperate.
- He will now lead us to do things that he wants.
- He can sit and listen for 20 minutes.
- Last year he was hitting everybody and we had to leave a party after 10 minutes. This year he played and was no bother. He sat at the table and ate with everyone. We stayed till the end.
- He didn't like people in his big personal space. He used to push them away and eject them. He doesn't do that now.
- His aggression has gone. I (nana) used to have black eyes and he'd be black and blue. That's not happening now.
- He nips a lot less.
- He used to throw and break everything. We couldn't take him in a shop or café. Now I can take him out on my own and he's fine.
- He's eating a wide range of food now. Most savoury things are good. He just has to have it mashed. That's a big difference. He only used to eat Weetabix and yoghurt.
- He used to be in a buggy all the time. Now he walks miles. We got rid of the buggy.
- He has lots of stamina.
- Swimming is no longer a problem. He enjoys it.
- He is drinking more, but still from a syringe.
- Better walking down stairs, alternate feet.
- He'll hang upside down on the climbing frame and he never did before.
- People say how well he's walking.
- We are actually planning to go on holiday to Ireland. It's unbelievable.
- The book from school has lots of really good days now. We used to dread what they would write!
- He smiles a lot now.

Quote from Nana (his legal guardian) :
When other people notice how much he's changed and comment on it, you realize how much he's improved. I can now take him anywhere on my own. I couldn't do that before.

Case I - Aged 7 years, Cerebral Palsy, Learning Difficulties

He spent the first year of his life in hospital on a ventilator and parents were constantly being told that he would not survive. Each time he recovered he would become severely ill again. This included infections in the bowel, septicemia, fits, turning blue, uncontrollable fast heart rate and brain bleed, alongside constant problems with breathing and more. For this first year, he was intubated and lying on his back the majority of the time with limited physical contact and stimulation. His parents cuddled him as much as they could. By one year he was smiling and responding. He is a delight!

Just a few of the changes:

- He is more able to express his emotions and this reduces his frustration.
- He no longer bites or hits out.
- He is now good at following instructions.
- His understanding has improved considerably which helps with everything.
- It's easier to have a proper conversation with him.
- He can concentrate on listening much better and understand better.

- Anger control has improved, with temper tantrums much less frequent.
- He is now able to persevere on the task. He is less impatient.
- Self harm has reduced. Although he will still occasionally head bang, this is less often.
- He is much more cooperative.
- He is more patient.
- He is keen to read - pointing out the words in books and looking at TV programming.
- He is able to build simple sentences with word cards. All of his reading is taking place at home.
- He's making steady progress with reading and other areas of learning.
- He is now able to follow the concept of cause and effect and will respond to reasoning more easily.
- Processing speed has definitely improved.
- Fine motor control and use of the computer is now quite astonishing. He can fly around the Internet with ease.
- Balance and coordination have both improved.
- He can ride a bike with stabilizers and steers well.

Quote from dad: He has improved in all areas.

Case J – aged 7 years, Asperger's

Just a few of the changes:

- Still talks a lot, but now stops, listens and responds.
- She perseveres more.
- She is less disorganized and not so easily confused.
- She is more appropriately focused and less easily distracted in class.
- Over focus on details and a narrow view of the world is improving.
- She daydreams less and appears less vague.
- More able to sort the unnecessary from the important.
- More able to remain still.
- No longer screams out at night or has nightmares. Sleeps well.
- She was bedwetting three times a week. She stopped this early in the BrainChild program and now sleeps all night. The night terrors have stopped.
- She can vocalize her feelings. More stable emotions, behaviour, response to change, allergies, better creative thinking.
- Asthma has improved.
- She is more adaptable.
- She finds it easier to make decisions.
- Some improvements in her tolerance to stress.
- She is less clingy.
- She is less likely to be socially embarrassed.
- She is much more likely to feel comfortable in a situation and be prepared to talk.
- She is still sometimes violent but not as often or over such trivial issues.
- Concentration and comprehension has improved with maths and reading.
- More able to remain still.
- As she walks down the street she no longer walks in front of mum. She stays in her own space.
- Her balance and co-ordination has improved. She is much better on the climbing frame. Doing well with ball skills, jumping and skipping.
- More fluidity of movement.

Mum's quote:

Several months ago, her teacher said that she was now volunteering in class to show her work or read a story, whereas before she wouldn't do any of that. They've noticed quite a difference in her!

Case K - Asperger's Syndrome with Oppositional Defiant Disorder.

Not a reliable re-assessment as home schooling began at the same time and he also refused to attend sessions.

Case L – Aged 7 years, Asperger's Syndrome

Just a few of the changes:

- He is able to communicate better. Understanding and following instructions more easily. It's much better. When we used to ask him to do things he was just blank. Not now. If he doesn't understand immediately he will ask, "What do you mean?"
- His language is developing well. He has a good vocabulary.
- He is listening better at home, even when he is excited.
- At parents' evening they reported that he is listening better and for longer.
- He has developed a great sense of humour.
- Speech is clearer.
- He is able to recall and express learned information now.
- He expresses his desire to be independent. He is proud of his achievements. He is aware of them!
- His reasoning has improved - he can understand cause and effect now.
- He is less self isolated. He rarely walks about telling himself stories and will run up to someone saying, "I'm here!" He plays with others more.
- His general behaviour around other people is now appropriate. We notice that he looks the same as everyone else at football sessions.
- He is definitely more able to read other people's body language and expressions. Before the BrainChild Program, if he was doing something wrong he wouldn't notice my expression. Now he asks "Are you angry mum?"
- Inappropriate closeness to people is a lot better. He still enjoys being close to us.
- He is wanting to do more things. He asked to learn how to cook. He would never have asked anything like that.
- His interest in everything has increased.
- His perseverance has increased.
- His reading has taken a huge step and his numeracy is doing well.
- His teacher reports that he is a joy to teach - he wants to learn.
- He can now ride a bike without stabilizers and turn corners too. He is a star!
- He has started to play and enjoy Football.
- He can now run really well and fast. It is more coordinated and fluid.
- He gets himself dressed completely on his own. He is proud that he can do it. He says, "look I can do it!"
- Handwriting is easier and neater. Immature writing is no more.

Quote from mum:

Joan Hunt, the autism specialist, saw him after one year. Her comment was: "What a difference!"

Case M – aged 7 years, Dyspraxia & Dyslexia

Just a few of the changes:

- Speech is clearer.
- He is understanding more.
- Concentration is better.
- Organisational skills are better.
- Attention is easier and sustained for longer.
- He daydreams less.
- Awareness of personal space is now there.
- He is much more confident.
- Reading has made good progress. He is less likely to miss reading words or lines.
- He can remember what he has read.
- He is now happier to write as it has become easier.
- Handwriting has improved.
- He is more creative in his thinking.
- His concentration span has improved.
- Speed of processing has improved.

- He can think things through, connect ideas and reason.
- Short term memory is better.
- Layout on the page is better.
- He has more stamina. He now rides a bike and can complete a 10 mile ride without giving up.
- All physical activities are easier and better. His movements are more fluid and co-ordinated.
- His reduced muscle tone has improved. He is not so floppy.
- He can jump.
- Everyone has noticed big changes. He is signed off from the physiotherapist and occupational therapist.
- Posture has improved. He is more upright.
- He no longer gets cramps and pains when writing.
- He now walks evenly, so his shoes wear evenly and his gait is better.
- Co-ordination has improved, so he can enjoy dance and sport.
- Balance is better.
- He falls over less often.
- No longer bumps into things.
- Motor planning has improved.
- His visual tracking is better.
- Fine motor control is better for things like using cutlery and buttons and using each hand for different things.
- He has motivation to be active.
- Fluctuating blood sugar levels, fatigue, digestive problems, motion sickness have all improved.

Quote from mum: Remarkable improvements.

Case N – aged 8 years, Dyslexia , Dyscalcula, Asperger's Syndrome

Just a few of the changes:

- She has made friends quickly with new people in school.
- She is now able to see situations from another person's perspective.
- She was stubborn to the extreme. This has improved and she tries to see the other person's point of view.
- She is much calmer.
- Now she can be still. Flapping, hand contortions, jumping, bouncing, hugging are much reduced.
- She used to be worried about the order of everything, such as putting on her clothes. Now she's not bothered.
- Reading has progressed. She used to become very distressed. School have commented on the rate of improvement. She tackles the page without panic and is keen to have a go.
- She is much better at making choices.
- The lunchtime supervisor has observed that she is more relaxed.
- She is no longer curling up in a ball and is able to fight back and stand up for herself.
- She rarely breath holds now.
- She's no longer anxious. She will do things on our own which he didn't do before. She needed to be with mum/dad all the time. For example, now she will get herself ready for school, go downstairs on her own, and up to bed on her own. This is a big change.
- She had a fear of spiders. She recently caught one and was calm. (Hannah could talk about this with humour and no anxiety.)
- She is better at handling emotions.
- She no longer asks to not be left alone. This has been helped by school clubs.
- So all the following have improved: difficulty adapting, fears, hyper activity of emotions, external movements, feeling trapped, fear of change, excessive sensitivity. She has a more normal response now in all these areas.
- If she was not understood she would shut down. This no longer happens.
- Obsessions - She was obsessive about the content of her lunch and would not eat it if it differed. Now she will eat it even if items are missing or different.
- She used to get confused for example, while dressing. This would make her annoyed and she would give up. Now she will persevere.
- She keeps her room tidy.
- Can follow rules.

- There has been a big improvement in her attitude to writing. Handwriting has improved. She writes little stories with enjoyment.
- She is more creative with ideas, such as stories. This is now excellent.
- Her pace has speeded up.
- She perseveres with many activities. She doesn't give up.
- Her sense of time is improving.
- School are impressed. She is now working in the main class more and is more integrated into the work.
- She is able to tolerate different clothing, tightness is no longer a problem.
- She likes her tactile therapy and her response to pain is reduced. She used to say "ow" so much more. Recently she was in a pile-up of children in a game. She made no fuss and commented, "Boys are annoying."
- Her response to food, in terms of texture and taste is improving. She will try more new things.
- She was a messy eater. This has improved.
- Handwriting has improved.
- She used to contort her hands and stretch her jaw a great deal. Not now.
- She has mastered the use of scissors.
- Her posture is more upright.
- There is little toe walking now.

Mum comments:

I wanted her to be able to be calm and control her emotions and be able to do physical things that she found difficult. Big improvements have been seen in these areas, plus more! The process is not yet complete, because the program will continue to be used for a few months.

N's message:

N has noticed that it is now easier to stop her fingers fiddling when she is imagining things. She volunteered to try peas, onion bhaji, French cheeses and blue cheese and likes them all, except peas. She liked the BrainChild sessions - especially making friends, tactile and massage stories, doggie training and commando crawl.

Case O – aged 9 years, ASD, CLD

Just a few of the changes:

- He didn't use to be able to verbalize feelings. We didn't know what the problem was. Now we do.
- Improved concentration
- Organizational skills have improved. He can now get out his own clothes and get dressed and make his own bed. He is much less forgetful.
- Time and space perception is better.
- There have been noticeable differences socially. He chose to go and talk to some visiting girls rather than staying on his computer in isolation. The interaction was appropriate.
- He has improved in his contact with people. He used to be over-familiar with too many questions.
- Better at releasing emotions- more in touch with his emotions now. There may be tears and the need for a hug and he's genuinely upset.
- No longer has delusions
- Better able to cope with change and is more adaptable.
- He seems to have generally matured.
- He has greater tolerance of stress. Not as anxious.
- He held on to his breath at inappropriate times. E.g. sleeping and just relaxing. There seemed no obvious reason. This no longer happens.
- He used to get very distressed, he cried, bent forward and pulled at his clothes, shouting and pushing. This no longer happens.
- He has more self control.
- He is no longer irate when asked to choose. He has improved in making decisions.
- Retention of spellings has improved. Eg 8/10 rather than 3/10 and now age - appropriate.
- Reading is good. He is making good progress at school. Reading is more fluent.
- He has good ideas and better imagination for his stories.
- Home work is completed more quickly and with no fuss. Easier writing.

- He works hard with great application. Perseveres.
- Processing is speedier.
- Creative thinking has improved.
- He now verbalizes his reasoning showing that he understands cause and effect.
- His reaction speed in relation to stimulus was poor. There is no longer a delay, it's much better.
- He used to insist on wearing shorts all through the year in the winter. Now he has started to need long trousers in the winter. He now responds to the cold. This started soon after beginning BrainChild.
- He used to prop himself up on things, hold mum's hand and drag on mum on the way to school. This has stopped.
- Ball skills have improved. Catching is now more automatic.
- He perseveres more with physical activities, such as trying harder to pedal uphill on his bike.
- His running has improved. There is more fluidity. He feels it is easier.
- Eating is much less messy.
- He is able to move his arms and legs independently.
- Body awareness has improved. He was observed to turn his body to go through a crowd. He used to avoid crowds and just come back to his mother. Now he can take evasive action and doesn't bump into people.
- Motor planning is now good.
- Improved tracking skills.
- Clumsiness, jumping etc. is now okay.

Quote from mum:

Probably the most noticeable improvement has been in his schoolwork. It's excellent! Such a big improvement. It's really good! He thinks it's really good!

Case P – aged 11 years, Classic autism with Complex Learning Difficulties.

Just a few of the changes:

- His communication was barely functional. He would say one word if he wanted food for example. Now he will tell/ask you to get it and where it is and says come here etc. His communication is now two way. It is basic conversation. For example, in the car he turns to friends of his sister and engages them in conversation about things that are going past. He is keen to communicate. He has much more language.
- There is much less echolalia. He is using phrases including 'mine' and showing the concept of ownership.
- His concentrated listening is more than we could have hoped. He follows instructions calmly and easily.
- Cooperation has increased- he can now willingly follow instructions. He just accepts an explanation if we are going somewhere or doing something. His understanding of time and reduction in anxiety means that the sequence of when he can understand what is happening is stretched out to a week. He now knows the days of the week. He can see what's coming in more detail. So he's calm about it. Things are making sense to him. He no longer refuses to go to places he would refuse before. We no longer have him throwing himself down, or running away.
- Visual prompts are still used and copying actions is really good. He loves rhymes and singing and makes them up, with actions. He is talking all the time, singing and happy.
- Abstract reasoning skills were very poor. They are so much better that he negotiates. It's not just a yes or no, he will give an alternative, not scream and shout as he used to.
- There is no elective mutism anymore. He used to have a freeze reaction-this has stopped.
- So many things are much better or gone. He needs to control less, he is more focused and is much easier to be with. He is just able to do more things more easily.
- Self organisation has improved hugely. He dresses himself. He goes and puts on his pyjamas on his own. He will go and get his uniform if he is sent for it. He does not need much prompting now. He can put on his shoes. He makes his own sandwiches and toast, get drinks, and collects cutlery. If he is told to turn things off, or collect things to go out, for example, he can do it.
- He rarely daydreams now and his attention is more focused. He is not hyperactive. Nor does he stare blankly, or have dizzy behaviour.
- He is less forgetful and perseveres with each task.

- He is more interested in everything. He talks as we drive, commenting on everything such as mum driving, turning the steering wheel, right, left.... And all he can see outside, the blossom on the trees..... and so on. Previously, anything outside of his own little bubble was not noticed. His communication was barely functional.
- His concentration was like a goldfish –it has vastly improved. He couldn't do anything that required concentration. This is a huge change.
- Socially he wants to involve his parents and sister in play. He directs the play. He just used to have repetitive patterns that did not involve others.
- People have noticed a dramatic difference socially. He plays cooperatively with his sister and doesn't hurt her on the trampoline as he used to.
- He is affectionate now, doesn't push us away.
- No temper tantrums now. Just a little controlling behaviour.
- He now craves attention in a good way involving his dad/sister/mum in play.
- He helps other children more. Even though he was bitten by one child he just said OW! And carried on.
- Nothing is anywhere as bad as it used to be. He will try anything and is not anxious or frightened. We can challenge him more now, because he won't over-react. We are amazed at what he will and can do. Last summer before starting BrainChild he wouldn't get out of the car if it was a new place. Not now. We can take him to shops, swimming pools, sport centres, almost anywhere. The BrainChild Program has helped him to take part in all the other events and go swimming.
- He is far more relaxed. We can't remember when he last refused to get out of the car. He has stopped hiding under the hood of his sweatshirts and rarely puts his hands over his ears. Before BrainChild these were common.
- Cooperation has increased- he can now willingly follow instructions. He just accepts an explanation if we are going somewhere or doing something. His understanding of time and reduction in anxiety means that the sequence of when he can understand what is happening is stretched out to a week. He now knows the days of the week. He can see what's coming in more detail. So he's calm about it. Things are making sense to him. He no longer refuses to go to places he would refuse before. We no longer have him throwing himself down, or running away.
- He no longer has a fear of water. He will go in the bath, loves the swimming pool and will do daring things with water. He will try anything new and even did water walking in a big ball across the pool! He is chilled!
- His anxiety is better. He used to be violent often banging his chin with his hand. This happens very little now just before school. Only school makes him anxious. He does not seem to be challenged just contained.
- He is not obsessive.
- He is keen to try new foods-this is completely different to before BrainChild.
- His behaviour is no longer disorientated, fears have gone, emotions are calmer, his whole demeanour is calmer. He will let mum know if he is not happy. He no longer seems to feel trapped. Flapping and hitting his chin is rare.
- Some days he used to be anxious all the time. No longer a problem.
- His dislike of changes and slow adaptation to new conditions was a severe problem. This is no longer a problem. He is keen to try new foods-this is completely different to before BrainChild. He accepts change. He is now more independent and safely so.
- He can choose now.
- He can make decisions, is less confused.
- Speed of processing has improved.
- There is no elective mutism anymore. He used to have a freeze reaction - this has stopped.
- No temper tantrums now. Just a little controlling behaviour.
- He will try a wider range of foods, now some veg and fruit and still likes cake in all its forms!
- Creativity and flexibility has improved. He can now play and use objects to represent other things. He is happy to mix the toys from different sets which was terribly difficult for him earlier.
- He is more patient. He waited quietly for the trains. He would've thrown a fit before.
- He doesn't just have an immediate reaction and scream. He can look and reason and work things out. His problem-solving is really good. He observes a problem and solves it. He is calm and accepts things.
- His dislike of changes and slow adaptation to new conditions was a severe problem. This is no longer a problem. He is keen to try new foods-this is complicated different to before BrainChild. He accepts change. He is now more independent and safely so.
- So many things are much better or gone. He needs to control less, aggression is less, he is more adaptable, and is much easier to be with. He is just able to do more things more easily.
- He is far happier!!

- There was no expression of learned information. Now he is speaking about things all the time and making observations. He is aware of things outside his own little space. Eye contact is better.
- He is now trying to read signs and information around him. He spells out words. School do not teach reading. He wants to read....
- His concentration span is much better.
- Balance has improved.
- Awareness of where his body is in space has improved.
- He helps other children more. Even though he was bitten by one child he just said OW! And carried on.
- He is sleeping much longer at night, which is great for everyone.
- All the main concerns have now gone, except in relation to school. School is not using these improvements. We have adapted our approach as he has changed. They haven't . For example....they do not teach reading. He's ready now.

Quote from mum:

"There's not much that hasn't improved! Everything is better. There is so much it's hard to know where to start."

Spontaneous quote from his twin sister, "He has changed loads!"

Dad was honest when he said: "We were hoping for any improvement at all. But I didn't think it would make a difference. It's made a massive difference."

Their message.....

The BrainChild Program - Do it. Absolutely. The whole family will get something from it.

Case Q – aged 9 years, Classic ASD & CPLD

Just a few of the changes:

- There was nothing verbally, he communicated through gesture. Now he tries to communicate generally, not just essential needs. For example, he will come towards you, looking at you and put his arm around you. He guides us and communicates his needs.
- Now, he does have words. For example, he may say **custard**. We can now encourage him to say **I want custard**.
- His communication is more meaningful with less repetition of phrases out of context.
- He started to ask for a tickle. Now when I say I'm going to give you a squeeze, he will say **squeeze**. He even says **squeeze please**.
- He is willing to listen to what he's being asked. If he doesn't understand immediately he is no longer afraid and so does not react with flapping or hitting himself.
- Comprehension is much improved. Viv comments...In the re assessment session he followed instructions to go over to my desk and collect an orange pen, and to sit back in the swing, turn over, etc.
- He is now willing to listen. He doesn't put up a barrier and understands much more.
- He will now enjoy listening to reading.
- He doesn't block approaches anymore just because he doesn't understand them initially.
- He was not interested in communication, now he is.
- He wants to have contact with people and goes for it!
- He no longer isolates himself.
- He used to live in his own little world. Now he wants to be part of the family. This is a significant change.
- His general lack of alertness has improved enormously. Before it was like he was drugged. He is more alert and aware of his surroundings and wanting to be part of it.
- His little sister was shocked when he took the lead and started an interaction. He helped her onto the trampoline so they could play together. Then he was very gentle with his bouncing.
- He is pro active now, not just passive.
- His behaviour used to be rejection. Not only is he more receptive, but he will now participate. He does not want to spend so much time on his own.

- He didn't use to interact. It was more like ignoring people due to his ASD. Now he is more aware of things around him and approaches people, with better eye contact.
- Mum used to ask for a hug and he would freeze. Now he approaches and hugs her. He is proactive.
- He used to get anxious if he couldn't understand or do something. Now he continues to listen and can achieve much more.
- He will now try new foods.
- His response to emotional stress has improved and lessened. He couldn't deal with it at all before. Now he can.
- He is more relaxed.
- His obsessive behaviour has stopped. If we used to put away his DVDs in the wrong order he would hit himself on the head in distress. Not now.
- School report that they have not seen him hitting his head for a long while. Now he will only do this if he is very upset. In the past he used to do this so much that his hand was red and sore.
- He is more able to be cooperative.
- He is more able to persevere. He will keep on trying.
- He can choose now - for example, whether he wants to swing or spin in the swing. If given a choice of food (two choices) he has always said the last one. Recently, he chose the first and ate it all.
- Concentration is much better. His concentration span is good when he is interested. I now feel more confident in getting him to do something. It's not a rights trial. He is more able to be cooperative. I am not so anxious that he will refuse.
- He wants to learn to read.
- He is now very, very good at sleeping-fantastic! He used to wake up at 4 or 5 am and be fully awake. Now he wakes at 6.30. in the morning. He doesn't come down from bed anymore.
- His walking and running has more fluidity and he uses his arms in opposition now. He used to hold them still by his body.
- He used to lean on walls, objects and people. Now he is reminded not to.
- His coordination in gross motor activity is much better since Brainchild.
- He is more motivated to take part in activities which develop motor skills since Brainchild.
- In October half term, before Brainchild, he was just not interested in trying to kick a ball or catch. Now he is interested.
- Toe -walking is now only when he's bored and wants to do something new.
- His posture has improved. His head and body are more upright.
- He is very happy and content with himself. He is much less frustrated.
- He had no imagination or imaginary play. Recently, he created a scene from a video. He made it out of toys and used them to represent a scene.
- He gets bored more easily and is looking for things to do. He is not just happy with routine. There is no longer the need for repetitive behaviour.
- He rarely hits himself.
- His self esteem has improved.
- He has changed so much that we will need to focus on changing our way of interacting with him and increasing our expectations.
- Comment from Viv: Now he smiles a lot and his eyes twinkle as he engages with people and his surroundings.

Quote from mum from her email:

Thank you for the feedback session last Sunday, it was good to see you again and to discuss the progress Sam has made since starting Brainchild. I felt very proud of him as we drove home that evening, thinking of his achievements.

(Well done parents.....he couldn't have done it without mum and dad's help.)

Case R – aged 13 years, Kibuki Syndrome & SLD

Just a few of the changes:

- She has developed the ability to make sense of things.
- Understanding has moved on considerably. It used to be minimal.
- She now tries to have a conversation, for example, I say her sister is going on holiday and she will say aeroplane to continue the interaction.
- She is better at following instructions.
- She is more inquisitive. Although she still gets anxious in strange situations.

- Her concentration is better. She will spend time looking at a book and pointing. Excellent on a computer.
- She can dress herself now.
- She is more independent, more sensible and aware of the concept of responsibility. We don't have as many concerns.
- Before BrainChild we had to watch her 24/7 - now we can just keep an eye on her.
- She is much less anxious. She is calmer.
- She copes better with life and stress.
- She can cope better with change.
- She is much quieter and calmer. We can leave her and she is not as destructive.
- We had outbursts most days. Now she tends to have an outburst once every few weeks. They will only last an hour.
- She was aggressive, particularly with our middle daughter. Now she will cooperate more.
- She will persevere more.
- She is happier.
- She had a fixed body position and did not move her head in relation to the rest of her body. Her head is now more flexible and she looks more relaxed. She is more upright.
- Walking and posture is more fluid. Her gait was typical of a two year old. Her shoes used to wear badly on the outside edge. Not now. This has affected and improved her walking.
- Her fine motor skills have improved. She will use the keys on a computer to write her name.
- Sleep was a major issue. It is better. She still wakes at times but will now go back to sleep. She used to wake at 4 AM and stay awake.
- She is now going to bed of her own accord. She volunteers to go to bed. She settles very quickly in bed. She is so much better now. It's much more peaceful.
- She used to be a scavenger. She would eat anything such as raw sausages. In the last few months, her weight has been controlled by using a smaller plate and she has lost weight and improved her mobility.
- She would eat food on everyone else's plates as well as her own. Now she will sit at the table, eat her meal and she is fine. She doesn't overeat now. We can eat out.
- Toileting has improved because she will now ask for the toilet.

Quote from mum:

She now has a willingness to have a go.

The program has opened a window to us when we had no windows open. The small part we have covered is just a beginning. We just needed to know what to work on.

Case S – aged 13 years, Kibuki Syndrome & SLD

Just a few of the changes:

- Speech and communication has got better.
- At the annual review at school, they reported better communication with other children. She used to aggravate them to get attention. Not now. She is more content and communicates better.
- She has a great sense of humour. When she was at her Nana's she said "Thank you for having me, I know it's been a pleasure."
- She is now expressing her emotions which she didn't do before.
- Her reasoning skills have improved and it is easier to reason with her.
- She communicates her thoughts and relationships are better. She can now verbalize her feelings and doesn't get overwhelmed.
- Elective mutism has improved greatly.
- She used to say the same thing over and over and over. She does not do this now.
- Confusion and frustration used to lead to lack of interest or rebellion. This is a lot better.
- Concentration is much better. She is more patient and perseveres. If a task is set up at school she will complete it, even if she is not interested.
- She has been moved up a group to be with more communicative children. She has coped well and fits in well with the group. The other girls are chatty.
- She is now mixing well with her peers. She used to be just with adults.
- Over focusing on details is much less noticeable.

- She is more compliant.
- We are pleased she is not as touchy feely with strangers as she used to be.
- She is less likely to invade others' personal space and be too close.
- She is independent for short periods. She is able to have a bit of time on her own. She used to be glued to mum and dad. Now she will go off into another room and put on music and dance on her own.
- She will tell mum to go on and do things. She doesn't need her there. This was not possible last year.
- She can be alone for 10 minutes or more.
- She will now go and make the bed and put toys away of her own accord.
- She will go off and have a bath.
- Before BrainChild she was not relaxed enough to want to do things. Now she has more motivation to do things.
- Her confidence has developed. She can be a bit independent.
- She is a lot calmer.
- The phobias are nowhere near as severe.
- She used to have limited facial expression, now she is much happier and smiles a lot.
- She no longer makes repeated requests not to leave her alone. This has gone.
- She is not so anxious which helps her concentration, comprehension and she is now good at making choices.
- She used to have disorientated behaviour. We don't see this now.
- She is less emotional now and more relaxed.
- She is definitely calmer and more relaxed and she will say, "What shall I do when I feel like this?" She can then use strategies.
- Her tolerance of stress is much improved and there is less anxiety seemingly unrelated to reality.
- She has good self help skills. She often used to say, "I can't do it." Now she wants to do things herself and says "I can do it myself."
- Aggressive and hostile and offensive behaviour is past history.
- She doesn't lose control or lash out.
- Aggressive behaviour born out of frustration has improved a lot.
- Confusion and frustration used to lead to lack of interest or rebellion. This is a lot better.
- She will persevere with a task.
- She is more patient and perseveres.
- She is less distracted in the classroom.
- Learning seems easier for her.
- She is much more able to understand cause and effect.
- Posture is upright now.
- She is now able to use cutlery-just fine. She can also wash up and dry up and tidy up.
- She used to have a tendency to bend her body forward in anxiety. This is rare and only when she is really worried.
- Balance and coordination is much better. She is more able to organize her actions.
- Her self-esteem is much better.
- Life has got easier for us all.

Quote from mum:

The main thing is the mixing with her peers now, not aggravating them. She knows how to mix and has good attention. She is a real comedian and likes a good giggle.

APPENDIX 4. A FEW COMMENTS ABOUT THE BRAINCHILD DEVELOPMENTAL PROGRAM

- BrainChild - It's just a fun thing. Taking part doesn't feel like a chore. He enjoys the movements and it is a social thing. To begin with he wouldn't play or take part. Now he is playing cooperatively and interacting with everyone, even holding hands with others.
- We laughed such a lot. It was a great group.
- It's an interesting concept which is proving to help children on the autistic spectrum.
- The program has helped us to understand the difficulties our son has and shown us how we can help him.

- There is very little available to help support children and families affected by autism. I think there should be more opportunities to access alternative approaches and therapies locally in order to help a child's development and improve the quality of life for the whole family.
- He enjoys the tactile, proprioceptive and vestibular activities.
- The BrainChild Program has provided a very helpful and enjoyable series of sessions that have had very positive effects on our child's development. The sessions have been fun for both parents and children.
- The sessions have also helped him to develop his social interaction and communication skills with another group of people.
- They have also allowed us to build relationships with other families that understand the difficulties involved in having a child with a disability.
- Our son obviously enjoys the activities and exercises especially the more physical and those that involve massage.
- My daughter likes meeting other people and children and looks forward to going to the sessions.
- It is amazing to learn about these primitive reflexes and how they go on to affect your development.
- It is also very rewarding to watch your child learn to do something right before your eyes which we had taken for granted or never thought was important, for example, the commando crawl.
- We especially liked the program as it is very interactive and includes many different exercises and activities. They are nearly always fun, but at the same time they help to stimulate your child's physical and mental development.
- We also liked working in a small group and how Viv would demonstrate the exercises on a volunteer child or adult before we had a go.
- My son liked sitting on his own special blanket and, although not always cooperative, on a lot of occasions he had a good laugh.
- The grouping of compatible children is very good because it means all feel comfortable. We also liked that the process is gradual and the exercises are fun-hedgehog-crocodile etc. my child especially likes the tactile exercises and anything with music.
- I thought the Brainchild program was well-planned and the exercises were easy to follow.
- It was very informative. A good small group session - great being able to have our own space.
- Very good fun, varied exercises, challenging. It improves spatial awareness, concentration and confidence.
- Our daughter has enjoyed the Brainchild program. She has benefited from the small group sessions and the calm and positive way they were presented.
- We like the structure - very practical/ hands on.
- We found the Brainchild program interesting and entertaining. Our daughter found some of the exercises quite difficult due to the extent of her learning and physical difficulties but tried really hard at home and loved the "Wobbly jelly" and "Bug watch" exercises.
- We all enjoyed the Saturday sessions meeting other families and sharing experiences. Our daughter particularly loved to watch the other children and then copy the activities at home.
- I think every special needs child should be able to have the chance of the Brainchild program.
- Our son loves doing the exercises and won't let me forget tactile activities before bed. It's now his routine.
- We have had more fun together and have enjoyed being part of the group.
- We will continue to use the program and hopefully continue to benefit further.
- He enjoyed coming and he was sad that the sessions had finished. He liked the time and the attention and interaction. He liked the hands on nature. I think going back to tactile relationships is quite nice for them.