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The underlying basis of the communication difficulties of high functioning pervasive developmental disorder

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APPENDIX A2: CASE HISTORY INFORMATION FOR PARTICIPANTS FROM THE HFPDD GROUP

Table A2.1: Case history information for participants from the HFPDD group

Subject	Age/Gender	Diagnosis	Pregnancy	Birth	Milestones
A1	5.1 years Male	PDD - most likely Asperger's (neurodevelopmental paediatrician).	Healthy during pregnancy. Pregnancy full term.	Emergency caesarian due to failure to progress and pre-eclampsia. Weighed 4.2 kg. Incubated for a day.	Language milestones delayed. Motor and toileting milestones within normal range.
A2	5.1 years Female	Semantic-pragmatic disorder with PDD features (team of professionals at language unit).	Healthy during pregnancy. Pregnancy full term.	Emergency caesarian due to cord being too short and partial placenta praevia. Weighed 2.995 kg.	Fairly quiet baby. Easy but active baby. First words: At a year. First sentences: By 2 years. Motor and toileting milestones within normal range.
A3	5.2 years Male	Semantic-pragmatic disorder with PDD features (team of professionals at language unit).	Healthy during pregnancy. Pregnancy full term.	Natural birth. No complications. Weighed 3.2 kg. Slight jaundice.	Very quiet, extremely easy baby. Language milestones significantly delayed. Motor milestones within normal range. Toileting milestones delayed.
A4	5.2 years Male	Semantic-pragmatic disorder with PDD features (team of professionals at language unit). Also features ADHD.	Healthy during pregnancy but born at 33 weeks.	Emergency caesarian as irregular heartbeat detected. Weighed 3.1 kg.	Alert, active, easy baby. First words and sentences within normal range but communication difficulties noted early. Motor and toileting milestones within normal range.
A5	5.6 years Male	High functioning autism or Asperger's syndrome (neurodevelopmental paediatrician and team of professionals).	Healthy during pregnancy, although took medication to stop contractions from 24 weeks. Born at 39 weeks.	Natural delivery. No complications. Weighed 3.91 kg. Marked weight loss initially with slow weight gain.	Alert, active, vocal baby. Said first words well before a year. Said first sentences at 14 months. Motor milestones slightly delayed. Toileting milestones delayed.
A6	5.10 years Male	Asperger's syndrome (neurodevelopmental paediatrician).	Healthy during pregnancy. Born at 41 weeks. Labour induced.	Caesarian section. Weighed 4 kg. Suffered slight jaundice.	Active, very alert and extremely bright baby. First words at 12 months. First sentences at 2 years. Motor and toileting milestones within normal range.
A7	5.8 years Male	Asperger's syndrome with hyperlexia (team of professionals at language unit).	Information not available.	Information not available.	First words and sentences achieved within the average range, but did not use his language well for interaction. Toileting milestones delayed.
A8	5.11 years Male	Asperger's syndrome (educational psychologist and speech therapist).	Healthy during pregnancy. Pregnancy full term.	Caesarian section. Birth weight in normal range. Condition at birth healthy.	Easy baby with limited interest in environment. Quiet baby. First words and sentences within normal range but communication difficulties noted early. Motor and toileting milestones within normal range.

A9	5.11 years Female	Semantic-pragmatic disorder with some PDD features, also features attention deficit disorder (speech, therapist, educational psychologist).	Healthy during pregnancy. Pregnancy full term.	Emergency caesarian, as baby did not drop into birth canal. Weighed 3.2 kg. Incubated for 6 to 7 hours. Condition at birth healthy.	Easy baby. Loved babbling. First words within normal range. First sentences delayed (2.6 to 3 years). Motor and toileting milestones achieved within normal range.
A10	6.1 years Male	High functioning autism (child psychologist at child psychiatry clinic).	Severe emotional problems throughout pregnancy. Also breathing problems. Overdue by 2 and a half weeks.	Labour induced. Natural delivery with long labour. Weighed 3.6 kg. Incubated for some time.	Undemanding baby. Happy to be left on own. First words at 10 months. Motor milestones within average range. Bladder and bowel control achieved at 4 years. Seemed withdrawn and did not socialize with other children.
A11	6.1 years Male	Autism on higher end spectrum (neurologist).	Healthy during pregnancy. Few days overdue.	Natural delivery with epidural. Forceps used. Weighed 4 kg. Condition at birth fine.	Easy baby. Said first words at 17 months and first sentences much later. Crawled at 9 and a half months. Bladder control achieved at +/- 3 years. Bowel control on and off from 4 to 6 years.
A12	5.10 years Male	PDD-NOS (neurodevelopmental paediatrician).	Healthy during pregnancy. Mother smoked mildly during pregnancy. Born at 38 weeks.	Natural delivery. Weighed 3.1 kg. Jaundice at 7 days. Under lights for 3 days at home.	Quiet baby, not too colicky, fair sleeper. Said first words just under a year. However, vocabulary slow to develop and started combining words at +/- 2.6 years. Motor milestones within average range. Bladder control achieved within average range. Bowel control achieved at +/- 3.6 years.
A13	6.2 years Male	Displays many features PDD, mostly Asperger's. Also some symptoms of ADHD, but these appear to fluctuate, possibly suggesting an anxiety basis to these. Some obsessive-compulsive traits (professionals at psychiatric children's clinic).	Healthy during pregnancy. Born at 38 weeks.	Natural delivery. Weighed 3.1 kg. Breathing difficulties – oxygen administered.	Content baby. No early feeding problems, colic or sleep problems. Delayed first words and sentences, but developed quickly speaking fluently at a young age. Motor milestones within average range. Bladder and bowel control during day achieved at +/- 3.6 years.
A14	6.2 years Male	Semantic-pragmatic disorder with features PDD (team at language unit).	Healthy during pregnancy, although mother suffered from severe oedema. Took aspirin and filbon. Born at 43 weeks.	Labour was induced. Caesarian section due to foetal distress. Weighed 3.6 kg. Aspiration, had to be ventilated for a few days. Oxygen administered and incubated.	Very active baby. First words and sentences significantly delayed. Sat at 6 months, walked at 8 and half months, never crawled. Bladder and bowel control achieved at +/- 3 years.
A15	6.3 years Male	PDD-NOS (team of professionals at language unit).	Healthy during pregnancy but took Mogadon generic – Arum (5 mg per day). Full term.	Born by elective caesarian section. Weighed 3.7 kg. Condition soon after birth – stiff, jumpy, blue. Oxygen administered and was incubated. Underwent lumbar	Good-natured, slightly demanding but contented baby. Very hungry baby. Said "uh-uh" (no) at 10 months but then no further words until 2 years. First sentences at 2.6 to 3 years. Sat at 7 and a half months. Crawled at 9 and a half months. Walked at 18 months. Bladder control achieved

				puncture, head scans, blood tests, drip with antibiotics.	between 2 and 3 years. Couldn't recall when achieved bowel control.
A16	6.4 years Male	Semantic-pragmatic disorder with features PDD (speech therapist).	Healthy during pregnancy. Took Ipradol during pregnancy. Full term.	Caesarian section due to foetal distress. Cord was around neck. Forceps used. Apgars of 8 and then 10. Weighed 3.9 kg. Put under lights for 2 days for jaundice.	Happy, contented baby. First words and sentences significantly delayed. Motor milestones within the average range. Toilet trained at 2.6 to 3 years during the day and at 4 years at night.
A17	6.5 years Male	Semantic-pragmatic disorder with features PDD (speech therapist).	Healthy during pregnancy. Full term.	Labour was induced. Natural delivery with forceps. Apgar 2 – very feint heart beat. Weighed 3.52 kg. Required incubation. Suffered from jaundice.	Easy baby. First words early (7 months). First sentences within norm. Motor milestones delayed, sat at 7 months, crawled at 13 months and walked at 18 months. Bladder and bowel control achieved at +/- 2 years.
A18	6.5 years Female	PDD-NOS (team of professionals, including neurodevelopmental paediatrician).	Healthy during pregnancy. Born at 37 weeks.	Ceasarian section with epidural. Weighed 3.5 kg. Condition at birth good.	Easy baby. First words early (7 months). First sentences delayed (26 months). Sat at 6 and a half months, crawled at 12 months and walked at 18 months. Achieved bladder and bowel control at +/- 2.3 years.
A19	6.6 years Female	Semantic-pragmatic disorder with significant social difficulties and some obsessional behaviours (some features PDD) (team of professionals).	Healthy during pregnancy. Had antibiotics for septic molar during pregnancy (uncertain when). Removal of tooth in +/- the 8th month. Mother smoked during pregnancy.	Long period of labour (24 hours). Emergency caesarian carried out with spinal block. Umbilical cord detached from placenta. Apgars of 9 and 10. Incubated for a few hours after birth for observation. Slight jaundice.	Active baby who cried a lot. Said first words and sentences in average range, but not understood by anyone but mother. Sat within norm. Crawled at 6 months and walked at 11 months. Achieved bladder and bowel control during the day within normal range. Bladder control at night is still a problem.
A20	6.7 years Male	Autism on higher end spectrum (neurodevelopmental paediatrician).	Healthy during pregnancy. Viral upper respiratory tract infection during first trimester. Prozac taken throughout pregnancy. Full term.	Elective caesarian with epidural. Apgars 8 and 9. Weighed 3.23 kg. A large anterior fontanelle was noted at birth. Cyanotic twice. Suffered from jaundice and received phototherapy. Day after birth discovered heart murmur. Two holes in heart detected. Cleared at 3 months.	Extremely good baby who just slept. Very easy baby who initially was very undemanding. Happy to be left on his own. Very quiet baby. Only babbled at 11 months. First words at 12 months, but slow expanding his vocabulary. First sentences significantly delayed. Sat without support at 10 and a half months. Crawled at 11 months. Walked at 20 months. Bladder and bowel control significantly delayed.
A21	6.10 years Male	Semantic-pragmatic disorder with some features PDD (speech therapist), ADD with some fixations/obsessive behaviours	Healthy during pregnancy. Full term.	Emergency caesarian after a long labour due to foetal distress. Weighed 3.2 kg. Was treated for mild jaundice.	Suffered from colic. Had temper tantrums but was a content, happy baby in between these. First words early ("mama", "dada" at 7 months) and saying 'proper' words by 11 months. Said first

		(some features PDD) (neurodevelopmental paediatrician).			sentences at 19 months. Sat at 10 months, crawled at 12 months and walked at 18 months. Bladder/bowel control achieved at 3.6 years.
A22	6.11 years Male	Pervasive developmental disorder, most likely Asperger's syndrome although different professionals not completely in agreement (neurodevelopmental paediatrician, child psychiatrist).	Mother healthy during pregnancy but had bronchitis at the birth. Only took medication after the birth. Full term.	Caesarian due to previous birth being a caesarian. Weighed 4.3 kg. Healthy at birth.	Content baby but not a good sleeper and always hungry. Said first words within average range. However, at two years was not combining words and parents felt his language development had slowed. Sat at 6 months, crawled at 7 months and walked at 14 months. Achieved bladder and bowel control at 2.6 years.
A23	6.11 years Male	Global developmental delay with features suggestive of an autistic disorder. However, felt to be on higher end spectrum (neurodevelopmental paediatrician).	Toxaemia of pregnancy. Born at 29 weeks.	Caesarian section. Weighed 1.10 grams. Lungs not fully developed. Hyaline membrane disease. Survantant ventilated for 2 days. Hospitalized for 6 weeks.	Active baby. Sat at 10 months, crawled at 16 months and walked at 20 months. Said first words at 18 months and first sentences at 36 months. Bowel and bladder control delayed.
A24	7.5 years Male	Asperger's syndrome, Moebius syndrome (team of professionals).	Mother healthy during the pregnancy. Mother smoked +/- 5 cigarettes a day during pregnancy. Born at 38 weeks.	Labour was induced as amnio showed high alpha-protein levels. Emergency caesarian after induction failed to bring on labour. Weighed 3.45 kg. Apgar of 9 and condition initially good. Condition deteriorated because of inability to suck. Lost 1.2 kg of birth weight in first 5 days and spent 5 days in neo-natal ICU on drip.	Easy but very alert baby. Said first words at +/- 9 months and first sentences at +/- 14 months. Only sat at 9 months, crawled at 18 months and walked at 28 months. Achieved bowel control at 2.6 years and bladder control at 2 years.
A25	7.10 years Male	Autism disorder. Felt to be on higher end spectrum, although some cognitive delay evident, also hyperactivity (team of professionals, including paediatricians, child psychiatrist, psychologist, speech therapist and occupational therapist).	Mother was 43 years when child was born. Suffered 2 miscarriages prior to this pregnancy. Length of pregnancy: 38 weeks. Mother suffered from swollen ankles but generally healthy during pregnancy.	Born by caesarian section under general anesthetic. Weighed 3.46 kg. Apgar score of 10/10 after 1 minute. Blood glucose was unstable and oral supplementation of glucose was required.	Did not demand attention as a baby and was happy to be left on his own. Active baby. Sat at 6 - 7 months. Crawled at 8 months. Walked at 12 – 15 months. Said first words just prior to 2 years but sometime after this stopped using these words. Language after this, slow to develop. Bladder and bowel control 5 years.
A26	7.11 years Female	Autistic Disorder and ADHD. Felt to be on higher end spectrum (team of professionals including a paediatrician and child	Pregnancy not planned – on oral contraceptives. Suffered from low blood pressure, black outs and vomiting	Born by emergency ceasarian at 7 months pregnancy. Weighed 2.27 kg. Apgar of 3/10. Was intubated and	Very quiet, sweet, easy, happy infant, who never used to cry or want to be picked up and placed few demands on others. Said first words at 3 years. Started using phrases soon after this. Sat at

		psychiatrist).	during pregnancy. Twin pregnancy. At 29 weeks intra-uterine growth retardation was found in one twin. At 33 weeks intra-uterine death of one twin was apparent.	resusitated at birth. Had mild respiratory distress syndrome but responded well to oxygen therapy. Placed in incubator for 10 days.	8 months, crawled at 10 months and walked at 12 to 14 months. On admittance to her school at 4.6 years was not using toilet. Mother reported seemed to be more a behavioural issue than due to poor bladder and bowel control, as would never wet bed at night.

	Feeding	**Health**	**Medication**	**Hearing**	**Vision**
A1	Breast then bottle fed. Some initial sucking difficulties.	Repeated bouts tonsillitis. One ear infection.	On Ritalin at time of assessment.	Hearing tested – no difficulties detected.	Not formally assessed. Not concerned. Appears strong visually.
A2	Projectile vomiting as an infant. Fussy eater.	Good health. Occasional ear infections treated successfully medically.	Not on any medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A3	Extremely fussy eater.	Good health. When 2.5 years hospitalized to have blockage removed from canal of ear.	Not on any medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A4	Fussy eater.	Good health. Suffered from encephalitis (due to chicken pox) at 3 years. Otitis media (18 to 30 months).	On Ritalin and Risperedol.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A5	As infant slow feeder. When younger would only accept smooth textures. Has improved.	Fair health but suspect slight low immunity. Hospitalized for observation when knocked unconscious during a fall when 1.3 years. One ear infection. Abnormal EEG although has never had seizures.	On Epilim, Risperdal and Emdalen.	Hearing tested – no difficulties detected. Hypersensitive to certain sounds.	Vision not tested but hypersensitive to bright light.
A6	Fussy eater. Dislikes lumpy foods and prefers bland foods. Allergic to a number of foods. Also other allergies (grass).	Good health. Recurrent ear infections but grommets never required.	Ritalin	Hearing tested – no difficulties detected. Has very acute hearing – auditory hypersensitive.	Vision tested. Wears blue tinted reading glasses.
A7	Extremely fussy eater.	Generally a healthy child.	Not on medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A8	Projectile vomiting until 7 to 9 months.	Good health. Good ear health. Only one ear infection reported.	Did receive Ritalin for short period but not on Ritalin at time of assessment.	Hearing tested – no difficulties detected.	Vision not tested but no reported concerns about vision.
A9	Fussy eater. Does not like foods of different textures mixed.	Good health, although slightly asthmatic. Good ear health.	Not on medication	Hearing tested – no difficulties detected.	Vision not tested but no reported concerns about vision.
A10	Fussy eater. Avoids certain food textures. Prefers soft foods and fluids to course textured food. Has food fads. Strong preference for pasta.	Generally healthy. Has suffered from sinusitis. Hospitalized for pneumonia at 11 months.	Not on medication.	No hearing defects.	No visual defects.

A11	Fussy eater, particularly during first 3 years.	Generally healthy. Hospitalized for croup once and for tongue tie surgery once. A few ear infections when +/- 2 years.	On Ritalin	Hearing tested – no difficulties detected.	Vision has not been tested. Not concerned about vision.
A12	Allergic to dairy and wheat. A little fussy but does eat a range of food. Loves bread which he can't have.	Generally healthy. Hospitalized for croup at 18 months and gastroenteritis at 2.6 years. When younger had many loose stools and was found to not be digesting food properly. Suffers from eczema. A few ear infections during first year.	Not on medication.	Hearing tested – no difficulties detected.	Vision has not been tested. Not concerned about vision.
A13	Bottle fed. Good appetite, but reluctant to try new foods. Sensitive to different and new smells.	Generally healthy. Suffers from some eczema. Good ear health.	On Ritalin. Initial dosage had to be reduced as exacerbated obsessive-compulsive tendencies. Assessed off Ritalin, as assessed over weekends.	Hearing tested – no difficulties detected.	Vision tested – long sighted. Has been wearing glasses since 19 months.
A14	Hated bottle feeding, would only breast feed. Difficulty transitioning onto solids. Fussy eater. Allergic to eggs.	Generally healthy. Underwent a tonsillectomy when younger. Good ear health.	Not on medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A15	Very strong tongue thrust. Needed therapy to assist with feeding of solids. Fussy eater. Likes cereal and food that can be presented in portions/pieces, e.g. fish, chicken, bread.	Generally healthy. Inguinal hernia at 10 weeks. Apnoea attack during recovery. Has a rare condition called Startle Myoclonus (hereditary). Has suffered from chicken pox and mumps.	On low dose Ritalin. On 0.4 mg Rivotril.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A16	Good appetite. Sometimes plays with food. No reported feeding difficulties.	Generally healthy. Has suffered from chicken pox. Some ear infections leading to grommets.	On Ritalin.	Hearing tested – no difficulties detected.	Vision tested - no difficulties detected.
A17	Prefers hard, crunchy food. Dislikes soft and sloppy food.	Generally healthy. Has suffered from chicken pox. History of middle ear infections. One set of grommets inserted at +/- 9 months.	Not on medication at time of assessment.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A18	Bottle fed. Used to fall asleep when feeding. Allergic to dairy, was on soya milk. Not a fussy eater.	Generally healthy. Hospitalized once for gastroenteritis and once for a tonsillectomy. Suffered from middle ear infections during first two years - treated with antibiotics.	Cipramil (for anxiety)	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A19	Breast fed and supplemented with bottle. Fussy eater. Will go through phases where will only eat one or two foods. Range of foods will eat limited.	Generally healthy, although suffers from sinus problems. At 3 and a half fell from top of stairs. Has had a few ear infections.	Not on medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A20	Breast and bottle fed. No difficulties with sucking. Very	From birth right tear duct was blocked and this was opened surgically. Had a thick midline	Not on medication.	Hearing tested – no difficulties detected.	Vision tested – wears glasses for far

	fussy eater. Dislikes textured food. Prefers soft foods and foods of smooth textures. Chews for a while without swallowing or seems to swallow whole pieces and often chokes.	frenula between his gum and upper lip which was cut and has had a tongue tie cut. Tonsils and adenoids were removed at +/- 2 years. Has suffered from sinusitis and tonsillitis. Had a strangulated hernia at 3 years. Has suffered from a number of upper respiratory tract infections and fevers. Allergic to preservatives and flavourants. Mild eczema. Suffered from a number of middle ear infections when younger. Has had 2 sets of grommets.			sightedness.
A21	No early feeding difficulties. Now a very fussy eater. Also intolerant to too much dairy.	Generally healthy. Suffers from sinus. Hospitalised for NEC at 6 weeks and tonsillectomy at 4 years. Broke his left arm +/- a year prior to the assessment.	On Ritalin	Hearing tested – no difficulties detected.	Vision tested – no difficulties tested.
A22	Bottle fed as a baby – no difficulties reported, apart from developing lactose intolerance. Later developed into an extremely fussy eater.	Developed bronchitis as a young infant. Suffered from chronic croup, which required hospitalization on 4 occasions. Right ear drum ruptured when he was 3 months old and had two sets of grommets inserted when he was a young child.	On Ritalin	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
A23	No reported feeding difficulties.	Generally a healthy child.	Not on medication	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected, although has undergone a period of visual therapy to improve eye movements. .
A24	As lips are paralyzed couldn't breastfeed. Fed with intravenous drip until could bottle feed. For 1st three months feeding was a problem and had to support mouth for him to be able to suck. Soon managed to suck by using tongue and palate. Still a messy eater because can't close mouth. Does not like to eat vegetables or red meat (due to associating blood with these).	Generally healthy. Had one epileptic seizure at +/- 3 years, for which he was hospitalized. Put on convulex for +/- a year after that (then took off again). Has also been hospitalized for an eye operation at 14 months and to have his teeth fixed. Up to 4 years had a few ear infections, which caused high temperatures.	On Fluantol – helps to control hand flapping and to improve attention span.	Hearing tested – no difficulties detected.	Vision has been tested. One eye can't move outwards. Wears glasses to correct this.
A25	Breast fed for 1.3 years. Difficulty sucking after birth. Very fussy eater. Prefers soft foods and fluids.	Generally a healthy child. Suffered from tonsillitis during first few years. Suffered from some high fevers. Also colds and some ear infections. Suffered from mild pneumonia at 2	On Melleril for hyperactivity, behaviour and to lessen emotional outbursts.	Has not managed a formal hearing test, but no difficulties suspected due to being able to imitate	Not formally assessed, but no difficulties suspected.

		years. MRI revealed a mega cisterna magna, with the prepontine cistern also appearing somewhat prominent in the posterior fossa.		what he hears around him so well.	
A26	No difficulty with sucking as a baby. Eats well and is not a fussy eater.	Generally a healthy child. Suffers from occasional coughs. Is over weight.	On Ritalin	Hearing tested – no difficulties detected.	No difficulties suspected.

	School/Therapies received	**Characteristics and difficulties as described by parents (teacher)**	**Home language/Family history**
A1	Removed from three different nursery schools due to schools' difficulties managing. Now at a fourth nursery school. Speech therapy. Occupational therapy has been recommended.	**Communication:** Poor verbal and non-verbal communication. Uses accent. **Behaviour:** Special interest - trains. Social and behavioural difficulties. Poor sleep patterns. Poor awareness of danger. Poor concentration. Hyperactive. **Play:** Good at puzzles. Poor symbolic play.	Only English spoken to child, although some Portuguese also spoken in the home. Language of school is English. Lives with both parents and younger sister and brother. Father was a late talker. Cousin receives speech therapy.
A2	At a language unit (specialized nursery school). Speech therapy. Occupational therapy. Play therapy.	**Communication:** Poor conversational skills and understanding complex language. **Behaviour:** Special interest - horses. Can become emotional. Exaggerated fear of the unknown. Restless sleeper. **Play:** Can be a loner with children in her peer group, if she does not know them well. Gets on better with older children. Does engage in fantasy play.	English. Lives with both parents and younger brother and sister. Family history of depression and learning difficulty.
A3	At language unit (specialized nursery school). Speech therapy. Occupational therapy.	**Communication:** Difficulty relating stories. Poor understanding of concepts. Difficulty with auditory processing. Grammatical errors. **Behaviour:** Behavioural difficulties and difficulty with social skills, although these have improved as has gotten older and language has improved. Tends to focus on irrelevant information and details. Very visual child. **Play:** Builds wonderful constructions in constructive play. Imaginative play delayed.	English. Lives with both parents and older sister. No family history of learning difficulties or psychological problems.
A4	At language unit (specialized nursery school). Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Articulation difficulties, grammatical difficulties and conversational difficulties. Before communication improved was extremely frustrated and aggressive. **Behaviour:** Some obsessive behaviours - tends to have a favourite topic/interest which changes with time. Social difficulties, particularly with peers. Likes interacting with older children and adults. **Play:** Imaginative and constructional play around his topic of interest. **Other:** Marked tactile defensiveness which has improved with intervention.	English and Afrikaans, but family speak English to child. Lives with both parents and older sister. Father diagnosed with ADHD.

A5	At specialized nursery school for children with developmental difficulties. Speech therapy. Occupational therapy. Physiotherapy. Applied behaviour analysis home programme. Auditory integration training.	**Communication:** Difficulty relating coherent stories and difficulty with conversation and staying on topic. **Behaviour:** Attention difficulties. Becomes frustrated easily. Has tantrums. Perseverative behaviour. Impulsive. Can be aggressive. Anxious and fearful. Significant difficulty with social skills. Requires high levels of supervision. Obsessed with machinery. **Play:** Does engage in pretend play but tends to be repetitive. **Other:** Significant sensory processing difficulties.	English Lives with both parents and older sister. Family history of anxiety, depression, obsessive-compulsive disorder and epilepsy.
A6	At remedial school. Speech therapy. Occupational therapy. Play therapy. Auditory integration training. Visual training.	**Communication:** Difficulty relating coherent stories and difficulty with conversation and staying on topic. Difficulty understanding instructions. Some grammatical errors. **Behaviour:** Concentration difficulty. Difficulty socializing with peers. Tends to gravitate towards older children. Can be aggressive. Easily frustrated. Difficulty falling asleep. Sensitive to loud noises. Startles easily. Topics of interest which becomes engrossed in include survivor or army games. Very sensitive child with low self esteem. **Play:** Does engage in pretend play around this. Will draw and build with blocks but creations are unconventional. **Other:** Sensory integration difficulties. Clumsy. Fine motor difficulties.	English and very limited amount of Greek. Lives with both parents and younger brother. Family history of depression.
A7	Recently began at a mainstream nursery school. Prior to this was at a language unit (specialized nursery school). Speech therapy. Occupational therapy. Physiotherapy. Play therapy.	**Communication:** Difficulty with more abstract language, tending to interpret things in an over literal manner. Difficulty with the social use of language and difficulty with conversation and staying on topic. Uses unusual intonation patterns, sing-song voice. Does not use good eye contact. Has a good rote memory and learns facts that interest him easily. Experiences difficulty with the creative use of language and talking about novel topics. Has topics that he returns to and perseverates on. These include numbers and letters, number plates, repeating something that has happened over and over and sound play (e.g. rhyming words over and over). Hyperlexic. **Behaviour:** Concentration difficulty. Experiences great difficulty interacting with other children and socializing with his peers. Tends to gravitate towards adults or is happy to be on his own. Prefers individual rather than group activities. Displays much anxiety. Dislikes change. **Play:** Does not engage in much pretend play. Prefers reading books, puzzles and constructional play activities. Prefers quiet play than gross motor play on outdoor play equipment. **Other:** Has low tone and poor postural control. Has sensory processing difficulties and fine and gross motor difficulties. Has motor planning difficulties. Has well developed visual perceptual skills.	English. Parents are divorced. Lives with mother and stepfather. Has contact with father and stepmother. Family history of bi-polar depression.
A8	At a mainstream school – grade R. Removed from nursery school to receive individual tutoring at home. Speech therapy. Occupational therapy.	**Communication:** Likes to speak about topics of interest. Dislikes speaking about other topics. Poor sensitivity to his communication partner. Repetitive asking of questions. Difficulty with the social use of language. Unconventional thinking. Difficulty with use of facial expression and eye contact. Difficulty expressing emotions. Some speech and grammatical errors. **Behaviour:** Special interests - locks, electrical appliances, batteries, taps, space, the inside of the body. Concentration difficulty but difficulty shifting attention from things that interest him. **Other:** Sensory processing difficulties. Difficulty with motor planning and bilateral integration. Difficulty with body image, eye-hand co-ordination and figure-ground perception.	English. Parents divorced. Lives with mother and three siblings (older brother and sister, younger sister). Sees father frequently. Older sister experienced some speech and language difficulties when younger.

A9	At a mainstream nursery school – grade R. Speech therapy.	**Communication:** Articulation difficulties, uses jargon, grammatical language difficulties, difficulty relating stories, difficulty staying on topic, difficulty with conversation, difficulty taking her conversational partner's perspective, difficulty following instructions. Difficulty waiting her turn. **Behaviour:** Concentration difficulty. Obsessive behaviours, e.g. that cards must be straight on table and that way she does something is correct. Sensitive to certain sounds, e.g. sound of pencil on paper. Strong visually. Likes to have things her own way. Socially immature.	English and Afrikaans but mainly English. Lives with mother and father. Has older half sister who does not live in the home. No family history of learning difficulties or psychological problems. Father has slight hearing loss.
A10	At a school for children with autism. Speech therapy. Occupational therapy.	**Communication:** Sometimes seems to ignore voices. Pronoun confusions. Limited conversational skills. Ritualistic and repetitive use of language. Poor turn taking. Gets hooked on topics of interest. Difficulty shifting attention from topic of interest. Speaks robotically. **Behaviour:** Obsessed with electrical appliances, fireworks, matches, machines and lawnmowers. Concentration difficulty. Lacks internal motivation. Reduced fear of danger. Hits other children. Can be aggressive, throws tantrums. Reduced awareness of others. Does not look for sympathy when upset/ill/tired. Only does what he feels like. **Play:** Poor pretend play. **Other:** Fine motor difficulties. Sensory processing difficulties. Dislikes physical contact.	English. Parents separated when 18 months old. Later divorced. Has older brother and sister. Mother and children live with grandmother. Father has history of depression. Mother went through emotional difficulties relating to divorce.
A11	Went to a specialized nursery school for one year. Has been in a mainstream nursery school for two years. Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Difficulty with abstract language. Difficulty relating stories. Sentences sometimes not constructed properly. Difficulty following discussions. **Behaviour:** Concentration difficulty. Has rituals and fixations, e.g. water towers and watching a cell phone charging. Can present with difficult behaviours. **Play:** Used to play on own but play with other children has improved. Tends to copy other children. Prefers construction play to pretend play. **Other:** Tends to be loud but auditory defensive to loud sounds. Some low muscle tone.	English. French is also spoken in the home but not to this child. Lives with mother and father and older sister. No family history of learning difficulties or psychological problems.
A12	In a mainstream nursery school Speech therapy Occupational therapy Physiotherapy	**Communication:** Communication difficulty, particularly at level of conversation and relating novel stories. However, can sometimes repeat back stories, that have been told to him, verbatim. Poor eye contact. Sometimes seems to "tune out". Difficulty understanding and using language to reason. Difficulty understanding more abstract language concepts. **Behaviour:** Attention/concentration difficulties. Had tantrums until recently. Handles frustration better now. Can be obsessive about stories that he has read, wanting to have them read and to act them out over and over; as well as about certain topics, e.g. animals. Also will draw the same picture (e.g. a lion) over and over for an extended period and then will change to another picture. **Play:** Difficulty interacting with other children, particularly children his own age. Likes to play with children on own terms. Prefers the company of adults. Does not engage in much pretend play.	English. Lives with both parents and brother of 8 years. Maternal cousin has ADHD and attends a remedial school.

A13	At a remedial school. Speech therapy. Occupational therapy. Play therapy.	**Communication:** Poor conversational skills, but never stops talking and asking questions. Sometimes "switches off" when being spoken to. Difficulty staying on topic. Perseverates in verbal expression. Fixates on an idea. Difficulty with temporal concepts. Poor pragmatic language skills. Does not use gesture. Difficulty following instructions. Difficulty modulating voice. Difficulty with abstract reasoning. Rote auditory recall a strength. **Behaviour:** Poor interaction with peers. Poor emotional reciprocity. Egocentric – wants own way. Can be manipulative, demanding and domineering. Can cut people out of his world. Mood swings. Resistance to change in routine. Fidgets, impulsive, difficulty concentrating, although can become "totally absorbed" in things that interest him. Obsessive – compulsive tendencies, for example contamination, perfectionism, counting, perseveration. Can display high levels of anxiety. Low frustration tolerance, overly sensitive and emotional. Will respond aggressively if remonstrated. Difficulty applying himself to tasks. Has tantrums/outbursts. **Play:** Excellent with building lego, blocks etc. Not much pretend play. Poor reciprocal play. **Other:** Poor postural control. Low toned. Sensory modulation difficulties. Tactile defensive. Motor planning difficulties.	English. Lives with both parents and brother of 4 years. Father suffered from learning difficulties and attended a remedial school.
A14	At language unit (specialized nursery school). Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Difficulty relating stories and at the conversational level. Difficulty "using" the language that he has acquired. Difficulty with functional language use. **Behaviour:** Difficulty interacting with peers, although enjoys being around other children. Very shy initially. Tends to be a passive child. Inattentive. Short tempered. Cries easily. **Play:** Enjoys TV, TV/computer games, drawing, building things, swimming. Not much pretend play.	English and Southern Sotho. Mother reports communication skills are better in English than Sotho. Lives with mother, stepfather, older stepsister and younger half brother. No family history of speech, language, learning, hearing, psychological or psychiatric difficulty.
A15	At language unit (specialized nursery school). Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Difficulty acquiring language and then difficulty "using" the language that he has acquired. Difficulty with verbal and non-verbal communication. Pragmatic language difficulties. Difficulty understanding what has been said to him, as well as with expressing himself. **Behaviour:** Difficulty interacting with peers. Tends to ignore adults. Likes his own way. Stubborn. Has tantrums. Is excessively competitive, hates to lose. Lacks confidence. Perseverates on certain things/topics, e.g. aeroplanes. **Play:** Lacks confidence with constructing things. Does not engage in much pretend play. **Other:** Gross motor difficulties, fine motor difficulties, motor planning difficulties and sensory modulation difficulties.	English. Lives with mother, father and older sister of 9 years. Older sister suffers from mild learning difficulty. Maternal uncle suffers from manic depression.

A16	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** General language difficulties (e.g. grammatical errors) together with more specific difficulties at discourse/conversational level. Observed to speak in long sentences, although sometimes repeats himself. Initiates irrelevant topics of conversation. Talks too much. Difficulty with more abstract and inferential language, as well as temporal language. More rapid speech tempo. Experiences difficulty following instructions. Does not use much gesture and poor eye contact sometimes reported. **Behaviour:** Attention difficulties. Tends to be impulsive and emotionally immature. Sometimes oppositional. Good natured and easy-going child. Relates to peers, although difficulty handling conflict situations. Tends to touch friends' or adults' arm or hair repetitively. Constantly seeks to make physical contact with people and objects through touching. Attempts to "head butt" other people's hair or body in a non-threatening manner. Exhibits behaviour of a repetitive nature and becomes entranced by motion or movement of objects. Odd behaviours such as repetitively picking up tiny pieces of fluff off floor. **Play:** Loves to play lego, watch TV and play computer games. Does play fantasy games. Enjoys playing with a bat and ball. **Other:** Sensory modulation difficulties. Difficulty with gross and fine motor co-ordination. Difficulty with visual-motor integration. Visual perception is an area of strength. Sensory processing difficulties.	English. Lives with father, mother, older sister and older brother. Older brother also at remedial school due to learning difficulties. No other family difficulties reported.
A17	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Difficulty at conversational level. Difficulty staying on topic, changes topic to topics of interest - vehicles (such as trailers, combine harvesters, bakkies) and lawnmowers and weed eaters. Difficulty relating stories - tends to focuses on the details. Pragmatic difficulties, such as difficulty with turn taking. Low oral tone resulting in poor speech clarity. **Behaviour:** Tends to be immature. Plays better with younger children than his peer group. Generally an even-tempered child. Can get cross at times. Sensitive child. Does not like to be teased. Perseverative behaviours noted. Tends to perseverate on topics and likes to speak about these (e.g. vehicles and gardening equipment). Sometimes perseverative movements of his hands observed (e.g. hand flapping). **Play:** Loves to construct and build things and enjoys woodwork. Loves outdoor play. Engages in some pretend play, although not extensive. **Other:** Sensory processing/integration difficulties and difficulty with motor planning.	English. Lives with mother, father and older sister. History of depression and anxiety on paternal side of family (grandfather, father and aunt).
A18	At language unit (specialized nursery school). Speech therapy. Occupational therapy. Physiotherapy. Play therapy.	**Communication:** Difficulty with appropriately using language that she has acquired. Difficulty communicating fluently. Pragmatic and conversational difficulties and difficulty relating stories. Difficulty understanding everything that has been said to her. **Behaviour:** Difficulty socializing with other children. Plays with adults or by herself . Does not really play "with" other children, tends to rather instruct them. From a young age obsession with elephants. Improved but still prefers to play with animals than anything else (e.g. dolls). Prefers a routine. General anxiety, with severe separation anxiety when younger. **Play:** Lots of constructional play. Likes to follow instructions from books and build things (e.g. electronic circuits). Loves computer games and books. **Other:** Gross and fine motor co-ordination difficulties. Difficulty with sensory processing. Sensitive to loud and high-pitched sounds.	English. Parents sometimes speak Afrikaans to each other. Lives with mother, father and younger sister. No family history of speech, language, learning, hearing, psychological or psychiatric difficulties.

A19	At a remedial school. Speech therapy. Occupational therapy. Play therapy.	**Communication:** Difficulty expressing herself, putting thoughts into words resulting in frustration. Word retrieval difficulty. Pragmatic language difficulties. Poor discourse and poor thinking and reasoning skills. Difficulty expressing and integrating emotions. Makes unusual associations. Also will repeatedly relate something she has seen on television and appears to experience difficulty distinguishing fantasy from reality. Frequently talks about topics related to death/dying. **Behaviour:** Poor social communication skills. Poor social knowledge and social judgment. Difficulty interacting with peers. Difficulty sharing attention. Difficulty working in a group. Attention difficulties. Anxiety. Low self esteem. Inflexible/strong willed/stubborn. Tries to control others. Can become aggressive when frustrated. Frequent bedwetting and occasional nightmares. Sensitive child. Can overreact to negative incidents. Low perseverance. Very observant and astute. Overly careful. **Play:** Loves drawing. Likes to make things, e.g. baking. Likes playing with pets. Some doll play. Poor play with peers.	English and Dutch. Only child. Lives with both parents. Father stuttered as a child and mother had a lisp. Paternal uncle has borderline personality disorder.
A20	At school for children with autistic spectrum disorders. Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Receptive and expressive language difficulty. Difficulty putting thoughts into words. Difficulty using language appropriately. Difficulty at the level of conversation. Needs encouragement to communicate spontaneously. Articulation errors. Some echolalia. **Behaviour:** Egocentric. Tantrums. Loves animals. Likes presence of animals more than people but can hurt animals. Very active. Impulsive. Tactile defensiveness and sensory modulation difficulties. Insecure in strange places. Stereotypical movement with arms sometimes noted. Dislikes changes in routine. Perceptive of differences in environment. Some perseveration, spinning and twirling of objects observed. Concentration difficulty and difficulty persevering. **Play:** Poorly developed interactional play. Often plays on his own or with animals, e.g. with a dog, rather than with peers. Repetitive action seen in play. While explores toys and objects, exploration seems to be mainly mechanical. Some obsessions noted, e.g. with doors. Pretend play limited, although some functional pretend play and limited fantasy play. Play tends to be rigid and mechanical. Difficulty playing constructively on own. **Other:** Difficulty with spatial orientation. Difficulties in the areas of perception, fine and gross motor co-ordination. Poor awareness of time. Low muscle tone. Drooled when younger.	English. Lives with mother and father and older sister. Maternal history of depression. Paternal uncle suffers from dyslexia. Mother's uncle suffers from a psychiatric problem.
A21	At a remedial school. Speech therapy. Occupational therapy. Physiotherapy. Play therapy.	**Communication:** Very verbal but communication is not always pragmatically appropriate. Difficulty at the level of conversation (with reciprocal give and take of conversation). Some articulation errors. **Behaviour:** Social skills sometimes inappropriate. Gets on better with older children and adults. More difficulty interacting with peers. Fixated with food. Also often talks about topics related to death and dying. Fidgets a lot and perseverates. Can be very manipulative. Attention difficulties. Low frustration tolerance, which can lead to aggression. Has had sleep apnoea and has suffered from some enuresis. Does not always sleep well. Can be anxious/worry excessively. **Play:** Engages in creative, constructive and imaginative play. **Other:** Has low muscle tone, gross motor and fine motor co-ordination difficulties. Sensory processing difficulties and in particular is sensitive to loud sounds. Likes to put things in his mouth.	English. Lives with mother, father and younger brother. Mother experienced some articulation difficulties and difficulty with spelling. Mother suffered from post natal depression.

A22	Attended a language unit (specialized nursery school) and now attends a remedial school. Speech therapy. Occupational therapy. Play therapy.	**Communication:** Communication difficulty, experiencing particular difficulty with the semantics, reasoning, discourse and pragmatics of language. Sometimes talks to himself under his breath. **Behaviour:** Difficulty interacting with peers, can be a loner and does not always interact appropriately. Has obsessions, particular topics of interest – these have changed with age. He will be obsessed with a particular topic/activity for a while and then will drop it for something else. Other repetitive, obsessive/persverative behaviours have included nail biting, picking the skin off his hands, constantly clearing his throat etc. Can be sensitive to change - difficulty coping with change. Can be anxious. Attention/concentration difficulty. Sensory processing/modulation difficulties – has gone through periods of auditory hypersensitivity and being both under and over aroused. Restless sleeper. Can sometimes be inflexible. Sometimes perseverates on activities/ideas. **Play:** Imaginative play was delayed. Does now use pretend play, although sometimes re-enacts same things over and over. Difficulty distinguishing between fantasy and reality.	English. Lives with both parents and older twin sisters. One of his sisters has suffered from remedial problems and attends a remedial school. One of his paternal cousins has been diagnosed with ADHD.
A23	At school for learners with autistic spectrum disorders Speech therapy Occupational therapy Play therapy Physiotherapy has been recommended	**Communication:** Has experienced difficulty with all aspects of speech/language - articulation, comprehension, semantics, grammar, discourse and pragmatics. Difficulty with verbal and non-verbal aspects of communication. Shows stereotyped and repetitive use of language. Was frequently echolalic (from TV) when he was younger – this has improved. **Behaviour:** Difficulty interacting with peers. Compulsive behaviour and obsessive thoughts. Tends to become preoccupied with a particular interest/subject, with these changing. Can be manipulative and unco-operative. Used to have outbursts of aggression and temper tantrums. Becomes attached to objects. Concentration difficulty. Restless. **Play:** Delay in developing spontaneous make-believe play and social imitative play. Enjoys watching the same video over and over. **Other:** Has a good memory. Gross motor co-ordination difficulties and low muscle tone. Fine motor co-ordination difficulties. Poor auditory and visual perceptual skills.	English. Parents also speak Hebrew. Lives with both parents. Is an only child.
A24	At a school for learners with autistic spectrum disorders. Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Pronunciation difficulties due to inability to make lip sounds. Experiences difficulty staying on topic – wanders into his own world and interests. Sometimes speaks to himself. **Behaviour:** Can be obsessed with certain things. Gets obsessed with stories and videos and for weeks will structure all discussions and activities around them. Obsessed with computers and videos – learns dialogue and sounds effects by heart. Does not enjoy playing with other children his age, only if they are interested in his interests – computers, videos and stories. Likes to interact with adults and older children – likes to question them about things. Difficulty understanding and expressing emotions. Very sensitive to smell. Hand flapping when he gets excited. Can be very noisy – talks, recites from movies and makes strange sounds. Can be inflexible. Hard to discipline. Throws tantrums. Concentration problem. **Play:** Does not like constructional play. Likes playing on the computer. Likes to collect small toys from movies, stories and plays and uses them to act out parts of the stories (usually using the book as a guide). Likes to be read to. **Other:** Poor motor co-ordination, balance, planning skills and is low toned. Very good observational skills.	English and Afrikaans. Mother and father separated. Lives with mother but sees father regularly. Mother experienced motor difficulties as a child. Father was an alcoholic but has been rehabilitated.

A25	At a school for learners with autistic spectrum disorders. Speech therapy. Occupational therapy.	**Communication:** Receptive language difficulties, can be echolalic, sentences do not always make sense, difficulty expressing himself verbally as well as compensating with gesture and facial expression, poor eye contact, difficulty conversing and with relating stories. Good at recalling words from songs and remembering the actions to action songs. **Behaviour:** Tends to ignore other children and experiences difficulty interacting with them. Has repetitive (ritualistic) behaviour. Will always do certain tasks in the same way. Has obsessive behaviours such as closing doors and will only eat certain foods. Likes routine and experiences difficulty coping with change. Special interests/obsessions, e.g. keys, magazines and has a fantasy with certain children's/video characters. Likes to do his own thing. Has a low frustration tolerance. Over-sensitivity to the tactile system and certain other sensations, e.g. going on an escalator. Sensitive to loud noises – may cover ears with hands. **Play:** Engages in very little pretend play and no fantasy play. Likes reading and paging through books. Likes watching television and copying what he sees. Difficulty interacting with environment. Tends to take toys apart. **Other:** Slight low muscle tone. Gross motor, fine motor and motor planning difficulties. Perceptual and visual motor integration difficulties. Sensory processing difficulties.	English and Afrikaans. Boards weekly in school hostel. Lives with parents and older brother (4 years his senior). Has two adult sisters. No known family history of physical, emotional, psychological, communication or learning problems.
A26	At a school for learners with autistic spectrum disorders. Speech therapy. Occupational therapy.	**Communication:** Difficult conversing yet remembers complex words such as "congratulations", "amazing", "delicious" and can use fairly long sentences. Talks a lot but topics of conversation are not always appropriate. Uses her language more as a monologue than a dialogue. Difficulty understanding language. Good with rote language such as counting, months of the year, remembering words from television commercials, songs etc. Repeats saying the same things over and over. Difficulty expressing emotions. Can be echolalic. Hyperlexic. **Behaviour:** Great difficulty interacting with other children her age or adults – does not seek out contact with other children. Difficulty sharing with other children. Does interact with adults and older children and enjoys attention from adults. Obsessed with TV, particularly TV game shows, as well as magazines. Has some rituals. Rigid way of thinking and doing things. Very independent, not needing others. Hyperactive. Short attention span. **Play:** Uses some pretend/imaginary play. However, tends to re-enact things she has seen on television in a stereotypical manner over and over. **Other:** Sensory processing difficulties - dislikes shoes and socks, strongly dislikes face and hair washing. Sometimes does not react to painful or uncomfortable sensory experiences, e.g. hurting herself, a bath that is too hot. Gross and fine motor co-ordination difficulties. Low tone. Poor motor planning.	Home language South Sotho but mother reports child prefers to speak English. Weekly boarder in school hostel. Lives with mother and older brother and sister. Parents are separated. Mother believes father manifests many aspects of an autistic spectrum disorder.

APPENDIX A3: CASE HISTORY INFORMATION FOR PARTICIPANTS FROM THE SLI GROUP

Table: A3.1: Case history information for participants from the SLI group

Subject	Age/Gender	Diagnosis	Pregnancy	Birth	Milestones
B1	5.2 years Male	SLI/Speech and language impairment (speech therapist, team of professionals).	Pregnancy: 41 and a half weeks. Mother's health good.	Labour was induced. Caesarian section performed as child was not engaging as cord was twisted around neck. Weighed 3.6 kg. Condition at birth generally good but went under lights for jaundice.	Happy but demanding baby. Uncertain when babbled. First words at 20 months. First sentences significantly delayed. Sat at 6 months, crawled at 8 months and walked at 13 months. Bladder and bowel control achieved at 24 months.
B2	5.4 years Female	SLI/Speech and language impairment (speech therapist, team of professionals, including neurodevelopmental paediatrician).	Mother suffered a miscarriage at 21 weeks prior to the pregnancy of this child. Pregnancy full term. Mother's health was good during pregnancy. Received iron supplement during pregnancy. Mother smoked and drank alcohol in moderation during pregnancy. Was blood incompatibility between parents.	Normal delivery with epidural. Normal presentation. Weighed 3.4 kg. Condition of child was good.	Mother described child's temperament as a baby as normal and easy. Babbling and first words were reported to occur within the normal range. However, language development from this point was reported to be slower than other children her age. First sentences significantly delayed. Sitting, crawling and walking were achieved within the normal range. Bladder and bowel control were achieved within the normal range.
B3	5.5 years Male	SLI/Speech and language impairment, learning difficulties, features ADD (team of professionals including neurodevelopmental paediatrician).	Threatened miscarriage at 3 to 4 months pregnancy. Pregnancy full term.	Normal delivery. Apgar of 10/10. Weighed 3.4 kg. Health after birth was good.	Content baby. Sitting, crawling and walking achieved within the average range. Could not recall ages when said first words and sentences. Bladder and bowel control by 2 years.
B4	5.4 years Male	SLI/Speech and language impairment (speech therapist, team of professionals).	Mother's health was good during pregnancy. Pregnancy full term.	Natural delivery with an epidural. Weighed 3.35 kg. Apgars of 9/10 and 10/10. Healthy condition after birth.	Good baby. Babbled at 7 and a half months. Said first words at 14 months. Said first sentences at +/- 19 months. First words and sentences, however, difficult to understand. Sat at 7 months, crawled at 10 and a half months and walked at +/- 15 months. Achieved bladder and bowel control at +/- 2 and a half years.
B5	5,10 years Male	SLI/Speech and language impairment (speech therapist and team of professionals).	Mother suffered 3 miscarriages prior to the birth of this child and 1 miscarriage prior to the birth of her previous child. Healthy pregnancy.	Born by means of selective caesarian section. Weighed 3.1 kg. Condition after birth healthy.	Child was a quiet, easy, happy baby. Babbled at 1 year. Said first words at 2 years. Said first sentences at 3 years. Sat at 6 months, crawled at 9 months and walked at 12 months. Achieved

			Treatment for hyperemisis at 10 weeks. Born at 38 weeks.		bladder control at 2 years and bowel control at 3 years.
B6	5,10 years Male	SLI/Speech and language impairment (speech therapist).	Mother healthy during pregnancy. Pregnancy full term.	Born my means of a selective caesarian section. Weighed 3.71 kg. Condition soon after birth was good.	Very active baby who did not sleep well. First words and sentences were delayed and when he did speak were difficult to understand. Sat at 5 and a half months, crawled at 6 months and walked at 11 months. Bladder control achieved between 2 and a half and 3 years. Bowel control achieved at 4 and a half years.
B7	5,9 years Male	SLI/Speech and language impairment, ADHD (team of professionals including speech therapist and neurodevelopmetal paediatrician).	Mother healthy during pregnancy. Pregnancy 1 and a half weeks over due date.	Labour was induced. After a prolonged labour born by emergency caesarian section. Weighed 3.6 kgs. Condition at and soon after birth was good.	Said first words at +/- 2 and a half to 3 years of age. Said first sentences at +/- 3 and a half years. Sat at +/- 5 to 6 months, crawled at +/- 6 to 8 months and walked at +/- 12 to 14 months. Achieved bladder control at +/- 2 and a half years and bowel control at +/- 3 years.
B8	5,9 years Male	SLI/Language impairment and concentration difficulty (speech therapist, team of professionals).	Mother had one miscarriage prior to the birth of this child and one prior to the birth of her previous child. Mother healthy during pregnancy. Easy pregnancy. Full term.	Natural birth. Weighed 3.31 kg. Slightly blue at birth. Achieved an APGAR of 9/10. Child incubated for 6 to 12 hours. Healthy during the period after the birth.	Happy baby. First words and sentences were achieved within the average range. Sitting, crawling and walking was achieved within the average range. Achieved bladder and bowel control at +/- 2 and three quarter years.
B9	6.2 years Female	SLI/Speech and language impairment (speech therapist, team of professionals).	Mother's health during pregnancy was good. Born at 38 weeks.	Born by means of a caesarian section. Weighed 3.1 kg. Child's body temperature did not regulate, was put in an incubator for +/- 16 hours.	A quiet, easy baby. Did not move a lot, was very still and did not roll onto tummy. Suffered from some colic. Said first words at 2 years and sentences that could be understood at 4 years. Rolled at +/- 9 months. Sat at +/- 9 months. Crawled at +/- 11 months. Walked at +/- 15 to 16 months. Achieved bladder and bowel control by +/- 2 years.
B10	6.0 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	Generally healthy apart from severe nauseous and fatigue during waking hours. Severe flu during third month of pregnancy. Pregnancy full term.	Born by means of a ceasarian section. Weighed: 3.01 kg. Incubated and oxygen administered immediately after birth for a few hours. Suffered mild jaundice.	Active, yet quiet baby. Very little babbling as an infant. Said first words with speech therapy at +/- 3 and a half years. Said first sentences with speech therapy at +/- 4 and a half years. Sat at 6 months, crawled at 8 months (although preferred rolling from place to place) and walked at 14 to 18 months. Bladder and bowel control achieved at +/- 4 years, with some accidents thereafter. Still difficulty with bladder control at night.
B11	5.10 years Male	SLI/Speech and language impairment (speech therapist, team of	Mother confined to bed rest for 6 months of the pregnancy due to threat to miscarry, go into labour.	Natural delivery. Weighed 3.1 kg at birth. Child's condition at and after the birth was	Active baby. Babbled as a baby. Mother did not feel first words or sentences were delayed. However, speech and language difficulties

		professionals, including educational psychologist).	Pregnancy 38 weeks. No medication taken during pregnancy.	good.	became evident later. Sat at 6 months, crawled at 9 months and walked at 13 months. Bladder and bowel control achieved at +/- 2 years.
B12	6.0 years Male	SLI/Speech and language impairment (speech therapist).	Mother healthy during pregnancy. Pregnancy was full term.	Natural delivery. Child's condition at and after the birth was good.	Speech, motor and toileting milestones were reportedly achieved within the average range.
B13	6.2 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	Mother healthy during pregnancy. Pregnancy full term.	Caesarian section due to baby being breech. Weighed 3.6 kg at birth. Low APGAR score. Born with cranial stenosis.	Baby cried a lot. Very active baby. Babbled as a baby. First words and sentences significantly delayed. Sat at 7 months, crawled at 10 months and walked at 15 months. Achieved bladder and bowel control at +/- 2 and a half years.
B14	6.1 years Male	SLI/Speech and language impairment (speech therapist).	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Child healthy at and during the period after the birth.	Quiet baby. Uncertain when said first words and sentences. Motor milestones achieved within the average range. Achieved bladder and bowel control just before he was 3 years.
B15	6.2 years Male	SLI/Speech and language impairment (speech therapist).	Information not available.	Information not available.	Information not available.
B16	6.1 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Weighed 3.4 kgs. Condition at birth good. Suffered jaundice on third day. Placed under ultra violet lights.	Quiet baby. Easy baby, although had occasional temper tantrums. Said first words at 16 months and first sentences at +/- 2 and a half years. Sat at 5 months, crawled at 8 months and walked at 1 year. Achieved bladder and bowel control at +/- 3 years.
B17	6.3 years Male	SLI/Speech and language impairment, ADD (speech therapist, team of professionals, including educational psychologist and neurodevelopmental paeditrician).	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery, with forceps. Broken clavicle bone on left side and marks on face from forceps. Weighed 3.9 kgs. Healthy after the birth.	Active, vocal baby. Suffered from colic for 4 months. Mother unable to recall ages said first words and sentences. Motor and toileting milestones achieved within the average range.
B18	6.7 years Female	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist and neurodevelopmental paediatrician).	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Weighed 3.2 kgs. At birth child's condition was good. Jaundiced soon after birth. Went under lights.	Child did not babble much. Only said first words at +/- 2 and a half years. First sentences at +/- 3 and a half with speech therapy. Sitting and crawling slightly delayed. Walked at 1 year. Achieved bladder and bowel control at +/- 2 and a half years.
B19	6.9 years Female	SLI/Speech and language impairment (speech therapist, team of	Mother healthy during pregnancy. Had teeth X-ray in early part pregnancy before knew pregnant.	Natural delivery. Breathing difficulties at birth. Taken to ICU for a short time.	Relatively content baby. Babbled at +/- 7 to 8 months. First words and sentences significantly delayed. Sat , crawled and walked within average

		professionals, including educational psychologist).	Pregnancy full term.	Weighed 3.7 kgs.	range. Walked early at 9 months. Toilet trained during the day at +/- 2 years. Toilet trained at night at +/- 3 years.
B20	6.7 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	Mother healthy during pregnancy. Hormones prescribed during first 12 weeks. Pregnancy full term.	Born by means of caesarian section. Weighed 3.45 kgs. Suffered from mild jaundice. Condition of baby otherwise good.	Active baby (normal activity levels). Speech, motor and toileting milestones achieved within the average range. However, by 2 years aware that speech and language was immature.
B21	6.9 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	Mother healthy during pregnancy. Pregnancy full term.	Born by means of a caesarian section. Weighed 2.8 kgs. Oxygen given immediately after birth as cord was twice around the neck. Placed in ICU for one day.	Cried easily as a baby. Mother described him as an angry and frustrated baby. Made first vocal sounds late. First words and sentences significantly delayed. Sitting, crawling and walking were all late. Walked at 17 months. Bladder and bowel control achieved at +/- 2 years.
B22	6.8 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	Mother healthy during pregnancy. Pregnancy 38 weeks.	Natural delivery with forceps. Weighed 3.6 kgs. Condition of child at and soon after the birth was good.	Cried and moaned a lot for the first two years for no apparent reason. Speech milestones significantly delayed. Only said first words at 3 years and first sentences some time after this. Sat at 7 months, crawled at 11 months and walked at 18 months. Bladder control was achieved within the normal range. Bowel control was achieved late.
B23	7.0 years Male	SLI/Speech and language impairment, ADD (speech therapist, team of professionals, including paediatric neurologist and educational psychologist).	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Forceps used. Some foetal distress. Child slightly blue, hypoxic. APGARs of 9 and 10. Suffered from mild jaundice. Weighed 3.4 kgs.	Suffered from some colic. Otherwise content baby, who had occasional temper tantrums . Difficulty establishing sleep patterns. Speech milestones delayed, only said first sentences at 3 to 4 years. Motor milestones achieved within average range. Bladder and bowel control achieved by 2 and a half years.
B24	7.2 years Male	SLI/Speech and language impairment (speech therapist, team of professionals, including educational psychologist).	At 22 weeks infant found to not be growing well. Monitored on a weekly basis until born. Mother was on Ipradol to stop mild contractions and half an aspirin daily. Born at 37 weeks.	Caesaraian section due to poor growth during pregnancy and baby lying breech. Weighed 2.6 kgs. No complications at the birth.	Very quiet baby. Easy baby. Never babbled. First words and sentences delayed. Said first sentences after 2 years. Sat at 6 months, crawled at 9 to 10 months and walked at 14 months. Achieved bladder and bowel control at +/- 3 years.
B25	7.7 years Male	SLI/Speech and language impairment (speech therapist, team of professionals).	Mother had unstable health during pregnancy. Had an irritable uterus and bladder infections. Born at 35 weeks.	Natural delivery. Oxygen administered at birth. No birth injuries experienced. Significant loss in infant's weight occurred soon after the	Was a very quiet baby. Said first words within average range but first sentences were significantly delayed. Sat, crawled and walked within the average range. Achieved bladder and bowel control within the average range.

				birth.	
B26	7.9 years Female	SLI/Speech and language impairment (speech therapist, educational psychologist).	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery, with forceps. Weighed 3.2 kgs. No birth injuries experienced. Condition of child at and soon after birth was good.	Quiet, easy baby. Achieved initial speech, motor and toileting milestones within normal range. However, slow to expand expressive vocabulary and when started with sentences experienced difficulty with correct sequencing of words, and sentences slow to develop in complexity.

	Feeding	**Health**	**Medication**	**Hearing**	**Vision**
B1	No early feeding difficulties. Transitioned onto solids well. Not particularly fussy eater but dislikes red meat.	Healthy child. Hospitalized when younger to have tonsils removed. Has suffered from some ear infections.	Not on any medication.	Hearing tested – no difficulties detected.	Vision not tested – has not been any reason for concern.
B2	No early feeding difficulties. Transitioned onto solids well. Not a particularly fussy eater but does not like meat.	Healthy child. Suffered from pneumonia at +/- a year, for which was hospitalized for a week. From 1 to 3 years suffered from a number of ear infections. Grommets inserted at 3 years.	Not on any medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
B3	No early feeding difficulties. Did not report on later feeding difficulties. Poor oral muscle control results in excessive saliva and dribbling.	Healthy child. Chicken pox at 1.10 years. At 3 years accidentally took overdose of tablets and hospitalized for one night. Just under 4 years fractured skull from fall. Has had a few ear infections.	On Ritalin.	Hearing tested – no difficulties detected.	Vision tested – Low amount far sightedness in each eye with some astigmatism in each eye. Mild convergence weakness and jerky eye tracking. Visual therapy prescribed.
B4	Breast and bottle fed. No early feeding difficulties.	Has had roseola, chicken pox, mumps and tonsillitis once. Has suffered from asthma – initially treated with medication and then homeopathically. Hospitalized for operation for one day for undescended testes.	Not on medication.	Hearing tested – no difficulties detected.	Not reported.
B5	As an infant did at times experience difficulty with early feeding due to often being congested. Child is now a fussy eater. Likes carbohydrates and meat and dislikes vegetables.	Child has suffered from poor health due to many ear and chest infections. Child hospitalized for asthma at 9 months for 1 week. Suffered from severe ear infections from 4 months to 3 years and had 4 sets of grommets inserted during this time. Tonsils were removed at 3.4 yrs.	On Slow Release Ritalin.	Hearing tested – no difficulties detected.	Vision tested – Wears glasses for long sightedness.
B6	No early or later feeding difficulties. Has his favourite foods but not really fussy.	Has generally experienced good health. Suffered from a number of ear infections until he was 3 years when grommets were inserted.	Not on medication.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.

		Has had 3 stitches on forehead.			
B7	Breast fed for 1 months. Then bottle fed. No early or later feeding difficulties.	History of bronchitis and tonsillitis. Had tonsils removed when he was +/- 4 and a half years. Has had allergic rashes. Ear health has generally been good, although negative pressure has been detected in his middle ears on a number of occasions without active infection – possibly due to underlying eustachain tube dysfunction.	On Ritalin.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
B8	Breast-fed for 15 months.	Child suffered from asthma from 6 months to 2 years and chronic eczema from 2 and a half years to 3 years. Also suffered from severe chicken pox at 3 years.	On Ritalin but was not on it for the assessment.	Hearing tested – no difficulties detected.	Vision tested – no difficulties detected.
B9	Bottle fed. No early feeding difficulties. A fussy eater. Loves green salad food but eats no other vegetables or meat.	Generally a healthy child. Hospitalized once when younger to have tonsils removed.	Not on medication.	Hearing tested – no difficulties experienced.	Vision tested – no difficulties experienced.
B10	No early feeding difficulties. Child, however, allergic to milk and dairy products. Fussy eater, preferring soft foods, not liking meat and dislikes trying new foods.	Severely sick with a lymph attacking virus at 2 years. Suffered from bronchitis at 3 years. Fell against oak furniture and received three stitches to head when younger. Suffers from chronic middle ear infections. Has previously had a myringotomy and three sets of grommets inserted. Suffers from allergic rhinitis and sinusitis. Suffers from frequent ear, nose and throat infections.	On homeopathic medication for ear health, allergies, sinus problems, tonsil problems, general immunity and for concentration.	Hearing tested – fluid build up in middle ears detected, which has been treated.	Vision tested – no difficulties detected.
B11	No feeding difficulties reported.	Healthy child. Ear health has been good.	Not on mediation.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
B12	Breast fed for 6 weeks and then bottle fed. No early or later feeding difficulties experienced.	Suffers from many allergies, resulting in a postnasal drip and upper respiratory tract congestion/infections. Suffered from chicken pox when he was 3 years. History of recurrent ear infections. These have been treated by antibiotics.	Not on medication.	Hearing tested – No difficulties detected.	Vision has not been assessed – Mother reported that there has never been a cause for concern.
B13	No feeding difficulties reported.	At 13 months craniotomy done to loosen all sutures and insert titanium plates and screws. Otherwise generally a healthy child. Eyebrow over left eye sutured twice after falls. Has had a few ear infections, not many.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
B14	Initially breast and then bottle fed. No early or later feeding	Hospitalized with meningitis when he was 4 years. Broke finger in car door when 5 years.	Not on medication	Hearing tested – No difficulties detected.	Vision has not been assessed – Parents

	difficulties experienced.	Suffers from allergies (upper respiratory – related to pollen and dust in the air). Ear health has generally been good, although occasionally has fluid build up in middle ears.			reported that there has never been a cause for concern.
B15	Information not available.	Information not available.	Not on medication.	Information not available.	Information not available.
B16	No difficulties with sucking, swallowing or chewing reported. However, is a fussy eater.	Described as a healthy child. Has had some ear infections from +/- 7 months. These have been treated with antibiotics.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No problem with visual acuity detected, however, eye tracking problems detected.
B17	No difficulties with sucking, swallowing or chewing reported. Not a good eater until +/- 2 years, then improved.	Healthy child. Had adenoids and tonsils removed at 2 years. Suffered from chicken pox at 5 years. Ear health has been good.	On Ritalin.	Hearing tested – No difficulties detected.	Vision tested – Had a 'lazy' eye, which has corrected itself.
B18	Breast and bottle fed. No feeding difficulties have been experienced.	When +/- 2 and a half years strange movements noted. Went onto Tegretol. Absences of attention were also later observed. Medication was later changed to Epilum. Epilum was discontinued at +/- 5.6 years. Still going for follow-up EEGs. Has suffered from recurrent ear infections and grommets have been inserted twice (when 6 months and 2 years). Prior to 12 months slight injury to arm in escalator accident.	Not on medication at time of assessment.	Hearing tested – No difficulties detected.	Vision tested – No difficulties tested.
B19	No early feeding difficulties. Now a fussy eater.	Has a history of middle ear infections. Have been treated by antibiotics. Otherwise a healthy child.	Not on medication at time assessment.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
B20	No early feeding difficulties. Very fussy eater. Likes very sweet and very salty foods. Dislikes mushy foods.	Very allergic to peanuts. Also allergic to chicken, peas and dairy. Had grommets inserted at 10 months. Suffers from asthma. Has been hospitalized 3 times for asthma - once at 18 months, once at 20 months and once at 5 years.	Not on medication at time of assessment.	Hearing tested – No difficulties detected.	Vision tested – Visual acuity not problematic but required eye exercises to improve eye movements.
B21	No early feeding difficulties. However, very fussy eater. Won't try new foods or mushy foods. Weight gain a problem when younger due to being so fussy.	Has had outbreaks of eczema. Has suffered from frequent ear infections, which were treated with antibiotics. Otherwise a healthy child.	On Ritalin.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
B22	No early feeding difficulties. Does not like hard foods, such as granola bars, that require biting	Described as a healthy child. Has had some middle ear infections. Had grommets inserted when he was 3 years.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – Has a slight stigmatism and a slight short-sightedness

	and chewing.				for which he wears glasses.
B23	Initially breast fed. Milk intolerance, went onto soya formula. No early feeding difficulties. Does not like foods that require a lot of chewing.	Some ear infections. One set grommets inserted.	On Ritalin.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
B24	Breast fed. Latched well. No initial feeding difficulties. Difficulty transferring onto solids. Fussy eater. Likes smooth textures. Still cannot chew meat easily, e.g. steak.	Suffers from asthma, Allergic to wheat and dairy. Has suffered from pneumonia. Has had 2 known ear infections and one set of grommets.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – Visual acuity fine but needed eye tracking exercises.
B25	Breast fed for a short time (1 month). Then bottle fed. No early feeding difficulties experienced. Fussy eater. Mainly eats bread, rice crispies and fruit.	Suffered from asthma, bronchitis and croup when much younger. Suffered from frequent colds and high temperatures when younger. Now health is generally good.	Not on medication.	Hearing tested – No difficulties detected.	Vision not formally assessed. Parents have not been concerned about child's vision.
B26	No early or later feeding difficulties experienced.	Described as a healthy child. Hospitalized once for croup. Only aware of one ear infection at 3 weeks of age. Ear health generally good.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – Wears glasses for close-up work.

	School/Therapies received	**General**	**Home language/Family history**
B1	At language unit (specialized nursery school). Speech therapy.	**Communication:** Has experienced difficulty articulating sounds and with expressing himself. Difficulty constructing long complex sentences and makes grammatical errors. Good understanding of language. **Behaviour:** Used to become aggressive with other children when they picked on him or teased him about his speech. Strong willed and strong minded yet warm, happy and loveable. Gets on well with his peers, older and younger children and adults. **Play:** Very creative in his play and plays with a wide variety of things.	English but parents speak a little Greek. Lives with both his parents and older brother. His brother required a short period of speech therapy. His paternal uncle received occupational therapy when he was a child. His maternal uncle suffers from some depression.
B2	At language unit (specialized nursery school). Speech therapy. Occupational therapy.	**Communication:** Difficulty expressing herself and says some words and sounds incorrectly. Does not always understand what is said to her. Has difficulty understanding a story. Speech is at times non-fluent. Difficulty concentrating, particularly on language tasks. **Behaviour:** Parents describe her as a happy, social, well adjusted, strong minded child, who is affectionate to family members. Plays well with other children. Loves to have friends over but is more a follower than a leader. Used to avoid adults that she did not know well and feel comfortable with but this has improved since speech has improved. **Play:** Engages in a lot of creative and pretend play. **Other:** Some difficulties with gross motor skills, visual perceptual skills and visual motor integration.	English. Lives with both parents and older brother of 11 years. No family history of speech, language, learning, hearing, psychological or psychiatric difficulties, however, paternal aunt reportedly spoke late.

B3	At a remedial school. Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Receptive and expressive language difficulties, as well as auditory processing difficulties. Low oral tone. Speaks unclearly. Poor vocabulary. Grammatical errors. Uses gesture. Difficulty following instructions. **Behaviour:** Relates well to peers, with whom he plays co-operatively and interacts well. Gets on well with siblings, teachers and other adults. Does not prefer to play on own. Friendly, endearing, lively, sociable, considerate, strong-minded child with a very good imagination. Coping on a social and emotional level. **Play:** Plays in a varied and constructive manner and uses pretend play. Play, however, tends to be haphazard. **Other:** Difficulty with concentration, postural control (low muscle tone), visual perception, sensory modulation, motor skills (particularly fine motor control) and planning. Tendency to perseverate. Very active.	English. Lives with both parents, older brother in grade 2 and 3 half siblings in 20s from father's previous marriage. Brother in grade 2 has an attention deficit and receives occupational therapy but in a mainstream school. Father reports he experienced difficulty concentrating at school.
B4	At language unit (specialized nursery school). Speech therapy. Home programme given by physiotherapist.	**Communication:** Difficulty expressing himself. Speech sound errors. Becomes upset when people don't understand him. Good comprehension of language. **Behaviour:** Initially shy with people he does not know but then interacts well. Gets on well with brother. **Play:** Plays with a variety of things and engages in pretend play. **Other:** Mild postural control difficulties.	English. Lives with both parents and older brother. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
B5	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Experiences difficulty with sentence construction (makes grammatical errors), relating stories, following instructions and understanding everything that has been said to him, and with articulating certain sounds. **Behaviour:** Can be sensitive to loud high pitched sounds. Can at times be compulsive and destructive. Loving, kind, happy, friendly, easy going child who is able to share. Well liked by and popular with peers. **Other:** Difficulty with visual perception and fine motor skills.	English. Lives with both parents and older brother. No family history of speech, language, learning, hearing, psychological, or psychiatric difficulties.
B6	At a mainstream school. Speech therapy. Occupational therapy.	**Communication:** Makes grammatical errors. Experiences difficulty relating stories. Makes articulation errors. Experiences difficulty following instructions. **Behaviour:** Sociable, friendly child. Gets on well with peers, family members, older and younger children and adults. **Play:** Enjoys a wide variety of types of play including outdoor play, fantasy play, lego and puzzles. **Other:** Concentration difficulty, particularly on language/ auditory tasks. Mild low postural tone, as well as fine motor coordination difficulties.	English Lives with mother, father and older sister. Mother reportedly experienced speech difficulties as a child. No family history of learning, hearing, psychological or psychiatric difficulties.

B7	At language unit (specialized nursery school). Speech therapy.	**Communication:** Difficulty concentrating. Impulsive. Very active child. Receptive and expressive language difficulties. Difficulty following instructions. Auditory memory difficulties. Does not use extensive vocabulary. Does not make long complex sentences and makes grammatical errors. Difficulty relating stories. Sounds errors in his speech. **Behaviour:** Enjoys the company of others. Enjoys playing with other children. Generally plays well with peers but sometimes impulsivity results in difficulties. Can sometimes be disruptive in a group situation. A strong personality. Well liked by peers and adults. Can be very warm and loving. Can also at times be difficult due to impulsivity, pushing boundaries and sometimes needing needs met immediately. Emotionally immature. Sometimes becomes anxious and has displayed separation anxiety. **Play:** Plays with a wide range of things. Enjoys active, outdoor play. Can play in a symbolic manner. **Other:** Presents with some low tone (mild).	English. Parents are divorced. Child is an only child. Lives with mother and sees father frequently. Father suffered from learning difficulties, dyslexia and attention difficulties. Paternal grandmother talked late and suffered from dyslexia. One aunt suffers from epilepsy. Mother suffered from postnatal depression for a few months after child's birth. No family history of psychological or psychiatric difficulties.
B8	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Uses words which sound similar to target word but which are different. Difficulty with auditory memory and listening comprehension. Difficulty following instructions. Difficulty expressing himself. Expressive syntax difficulties. **Behaviour:** Perseveration of behaviour noted. One on one very good relationship with peers. However, does not play well in groups of three or more. Eager to please. Spontaneous, loyal, protective, independent child. **Play:** Plays with a wide variety of things. **Other:** Distractible, inattentive and impulsive. Sequencing and planning difficulties. Sensory processing difficulties – sensory defensive.	English. Lives with mother, father and older brother. Mother experienced learning difficulties at school, diagnosed as being dyslexic and hyperactive. Mother suffered from postnatal depression after the birth of this child.
B9	At a remedial school. Speech therapy. Occupational therapy. Play therapy.	**Communication:** Difficulty with sentence construction and generally expressing herself. Makes grammatical errors. Sometimes articulates words incorrectly. **Behaviour:** A friendly child. Gets on well with family members. Enjoys other children's company. Social skills with peers, older and younger children and other adults has lagged due to speech and expressive language difficulty. **Play:** Plays with a variety of toy materials. Plays in a pretend manner. **Other:** Low postural tone and fine motor co-ordination difficulties. Does not like loud music. Difficulty concentrating.	English. Lives at home with both parents and two older sisters. There is no family history of speech, language, learning, hearing, psychological or psychiatric difficulties.
B10	At a mainstream school. Speech therapy. Physiotherapy.	**Communication:** Difficulty with articulation of sounds. Difficulty with sentence construction. Difficulty with relating stories. Auditory memory difficulties. **Behaviour:** Loves the company of other children and plays well with them. Also plays well on his own. A happy child, who has a serious nature as well. Co-operative. Enjoys responsibility. Independent. **Play:** Engages in much creative play. Has a good imagination. Also enjoys construction play, puzzles and drawing, colouring and painting. Loves listening to stories. **Other:** Concentration span can be short for certain activities. Suffers from low muscle tone. Pronation of feet.	English. German sometimes also spoken in home, but not to child. Lives at home with both parents. Has an older half sister of 26 years, who is married with a child. There is no family history of speech, language, learning, hearing, psychological or psychiatric difficulties.

B11	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Difficulty with the articulation of certain sounds. Difficulty with sentence construction. Grammatical errors evident in language. **Behaviour:** Loves the company of other children and plays well with them. Described as a vibrant, caring, strong willed, active, friendly child. **Play:** Enjoys imaginative and constructive play. **Other:** Fine motor co-ordination difficulties.	English. Lives at home with both parents and older brother and sister. There is no family history of speech, language, learning, hearing, psychological or psychiatric difficulties.
B12	At a mainstream nursery school. Speech therapy.	**Communication:** Has a number of articulation errors. Makes grammatical errors. Some difficulty relating stories. Some auditory memory difficulties. **Behaviour:** Gets on well with and enjoys playing with other children. Generally a well adjusted, co-operative, warm child. Can at times be strong willed and will occasionally tantrum but does listen to reason. **Play:** Engages in symbolic/pretend play and enjoys outdoor play. **Other:** Can be easily distracted.	English. Parents are separated. Child lives with mother and only very occasionally sees father. There is no family history of speech, language, learning, hearing, psychological or psychiatric difficulties.
B13	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Makes grammatical errors. Difficulty following instructions. Short term memory difficulties. **Behaviour:** Sucks middle and fourth finger of hand. Can be fairly aggressive when looses tempter. Does not like loud noises. Does not take well to changes and tends to take time to settle down after a change. Gets on well with other children, although tends to want to take the lead and sometimes looses temper if things do not go his way. Has a jovial disposition. Can be extremely volatile. **Play:** Plays well with construction toys such as lego and an electrical train set. Also engages in a lot of creative play. **Other:** Concentration difficulty. Also experiences spatial difficulties and difficulty crossing his midline.	English. Lives at home with both parents and older sister and brother. Parents experiencing marital difficulties resulting in unhappiness in the home. Epilepsy has been queried in child's father. Maternal aunt suffers from temporal lobe epilepsy.
B14	At a mainstream nursery school. Speech therapy. Occupational therapy.	**Communication:** Some difficulties in the area of receptive language. Expressive language difficulties. Does not use long, complex sentences and makes grammatical errors. Difficulty relating a story. Auditory memory difficulties. Makes a number of sound errors in his speech. **Behaviour:** Enjoys the company of other children and gets on well with them. Described as a gentle, warm, sensitive child. **Play:** Plays with a wide variety of things and can play in a symbolic manner. **Other:** Some visual processing difficulties.	English. Lives at home with mother, father and younger brother. Father experienced learning difficulties at school and did not complete high school.
B15	At a mainstream nursery school. Speech therapy recommended - parents have not carried through with recommendation.	**Communication:** Expressive language difficulty. Makes grammatical errors and does not use long, complex sentences. Difficulty relating stories. Auditory memory difficulties. Has some sound errors in his speech. **Behaviour:** Socializes well with his peers. No behaviour difficulties experienced. **Other:** Difficulty remaining focused on auditory tasks.	English. Lives at home with mother, father and two siblings. Information regarding family history of difficulties not available.

B16	At a remedial school. Speech therapy. Occupational therapy. Eye exercises.	**Communication:** Difficulty with articulating certain sounds. Word finding difficulty. Difficulty expressing himself. **Behaviour:** Gets on well with peers and likes playing with other children. Has many friends. Quiet, unless sure of surroundings. Hesitant to try anything unless he feels he knows how to do it. Strong minded but willing to listen. Good sense of humour. **Play:** Plays creatively and enjoys dressing up. He enjoys puzzles. Enjoys playing on the jungle gym and trampoline. **Other:** Has low muscle tone in his upper body and fine motor difficulties.	English. Lives at home with both parents and three older siblings. Child's father and maternal uncle experienced learning difficulties at school. There is no family history of psychological or psychiatric difficulties.
B17	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Makes articulation errors. Makes grammatical errors. Difficulty following instructions. **Behaviour:** Active – usually moving. Whistles a lot and makes repetitive noises and sounds. Gets on well with others and plays well with peers. Energetic. Talkative. Has an inquiring mind. Sensitive, considerate and helpful child. Can be a perfectionist. **Play:** Engages in a lot of creative and imaginative play, as well as constructive play. **Other:** Difficulty concentrating.	English. Lives at home with both parents and younger sister. Maternal uncle suffers from ADD. There is no family history of psychological or psychiatric difficulties.
B18	At language unit (specialized nursery school). Speech therapy.	**Communication:** Difficulty with articulating certain sounds. When younger had to be taught most sounds, sound combinations and grammatical combinations that she has through therapy. Significant expressive language difficulty. Auditory memory difficulty. **Behaviour:** Enjoys the company of other children and gets on well with. When younger communication difficulty sometimes prevented extent that she could join in with her peers, but this has improved. A strong-willed, friendly child who is generally co-operative. Sometimes displays some performance anxiety. **Play:** Plays imaginatively and with constructive toys. Also enjoys outdoor play. Plays with a wide variety of things.	English. Lives at home with both parents and older sister. Some anorexic/bulimic problems reported in extended family. No family difficulty of speech, language and/or hearing difficulties were reported.
B19	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Difficulty with articulating sounds. Expressive language difficulties, including word retrieval difficulties, poor expressive vocabulary and syntax/grammar difficulties. Auditory processing difficulties. **Behaviour:** Makes friends easily and generally interacts well with friends. However, in play will often seek out older and more mature children who will speak for her. Lively, loveable, strong-willed child who can be bossy. Can become difficult when does not have things her own way. Becomes easily frustrated. **Play:** Plays with a wide variety of things. Engages in imaginative play. Likes to draw. Likes to play outside. **Other:** Concentration difficulty. Poor gross and fine motor skills. Low muscle tone. Poor bilateral integration, balance and motor planning. Poor eye hand co-ordination. Difficulties in some aspects of visual perception.	English. Lives at home with both parents and older sister. Parents experiencing marital problems. Both parents experienced learning difficulties at school. Older sister experiencing difficulties at school and is on Ritalin for a concentration difficulty.
B20	At a remedial school. Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Talks unclearly. Sometimes drools, although much improved. Difficulty expressing himself. Difficulty following instructions. Auditory memory difficulties. **Behaviour:** Interacts well with other children, but does not make close friends easily. Plays well with brothers. Shy, sensitive child, who lacks self-confidence. **Play:** Plays imaginatively. Enjoys constructive play. Enjoys playing with other children. **Other:** Low muscle tone. Poor visual perception.	English. Lives at home with both parents and older and younger brother. Maternal uncle suffered from a learning difficulty at school. Paternal grandfather suffered from depression.

B21	At a remedial school. Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Difficulty following instructions. Difficulty expressing himself. Difficulty sequencing events. Poor auditory processing skills. **Behaviour:** Likes to play with other children but also enjoys playing on his own. Generally friendly and confident with others. Gentle and sensitive child. Affectionate to family. Can be stubborn. **Play:** Likes imaginary games, as well as constructive play (e.g. lego). Enjoys outdoor play, looking at insects etc. **Other:** Concentration difficulty. Has low muscle tone. Difficulties also detected with motor planning, balance, midline crossing and visual perception. Some sensory processing difficulties.	English. Maternal grandparents speak Portuguese. Lives at home with mother and father and two older sisters. Maternal uncle and aunt suffer from a hearing difficulty. Paternal uncle and grandmother experienced language and spelling difficulties. Paternal uncle also experienced difficulty with motor skills.
B22	At a remedial school. Was previously at a language unit (specialized nursery school). Speech therapy. Occupational therapy. Physiotherapy.	**Communication:** Difficulty expressing himself. Difficulty with sentence construction and makes a number of grammatical errors. Experiences difficulty articulating certain sounds correctly. **Behaviour:** Enjoys playing with and gets on well with his peers. Described as a sensitive, social, loving and generous child. **Play:** Enjoys creative/pretend play and also enjoys constructive play (such as building lego). **Other:** Experiences difficulty with gross and fine motor co-ordination and visual perception.	English. Lives at home with both parents and older brother. There is no family history of speech, language, learning, hearing, psychological or psychiatric difficulties.
B23	At a remedial school. Speech therapy. Occupational therapy.	**Communication:** Difficulty expressing himself. Difficulty with expressive vocabulary, word retrieval and sentence construction. Makes grammatical errors. Compensates by using gesture. Auditory processing difficulties. Difficulty articulating certain sounds correctly. **Behaviour:** Interacts well with peers. Friendly child. Sensitive and easily frustrated. Excitable. Fidgets. Displays anxiety and has a low self-confidence. Helpful child. Eager to please and achieve. **Play:** Plays with a variety of things and in an appropriate manner. Plays creatively, engaging in pretend play. Also engages in constructive play, e.g. lego. **Other:** Concentration difficulty. Difficulty with gross and fine motor co-ordination. Some low muscle tone, spatial problems and difficulty with certain aspects of visual processing. Difficulty with bilateral integration and crossing the midline. Some sensory processing difficulties, tactile defensiveness. Slow work pace.	English Lives at home with both parents. An only child. Paternal family history of attention, language and learning difficulties. Mother reported that she has spatial problems.
B24	At a remedial school. Speech therapy. Occupational therapy. Physiotherapy. Play therapy.	**Communication:** Difficulty expressing himself. Vocabulary slow to expand. Difficulty articulating certain sounds. **Behaviour:** Plays well with peers. Not very confident among adults. Cautious child. Quiet, shy, gentle and placid, easy child. Becomes upset if things do not go right. **Play:** Not good at playing on his own. Not too good with imaginary games. **Other:** Has low tone. Fine motor and some visual perceptual difficulties.	English. Lives at home with both parents and younger brother. No family history of speech, language, learning, hearing, psychological or psychiatric difficulties reported.

B25	At a mainstream school. Going to be starting at a remedial school. Speech therapy. Occupational therapy.	**Communication:** Difficulty expressing himself. Uses short, immature sentences. Difficulty following instructions. Receptive, expressive and auditory processing difficulties. Difficulty articulating certain sounds. **Behaviour:** Has battled with shyness, aggressive behaviour, temper tantrums and whining. Child does interact with his peers, but tends to be a follower and does not always fully participate due to his communication difficulty. Sensitive, good-natured child. **Play:** Plays with a wide variety of things. **Other:** Concentration difficulty. Low muscle tone in upper extremities. Poor gross and fine motor co-ordination. Slow work pace. Difficulty completing tasks.	English. Lives at home with mother and younger brother. Parents separated. Father experienced learning difficulties at school.
B26	At a mainstream school. Speech therapy. Occupational therapy.	**Communication:** Difficulty expressing herself. Word retrieval difficulties. Grammatical errors evident in language. Some speech sound errors evident. Difficulty with auditory processing, including auditory memory. **Behaviour:** Gets on well with peers, as well as younger and older children and adults. Described as very loving, happy and outgoing. **Play:** Enjoys creative/pretend play. Enjoys drawing, painting and dressing up. **Other:** Some fine motor co-ordination difficulties.	English and Afrikaans, although speak only English to child. At an English medium school. Lives at home with both parents and older sister. Mother experienced reading difficulties at school. No family history of speech, hearing, psychological or psychiatric difficulties reported.

APPENDIX A4: CASE HISTORY INFORMATION FOR PARTICIPANTS FROM THE NDD GROUP

Table A4.1: Case history information for participants from the NDD group

Subject	Age/Gender	Diagnosis	Pregnancy	Birth	Milestones
C1	5.4 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 38 weeks.	Caesarian section, due to small pelvis. Weighed 2.5 kgs. Condition of child at and soon after birth was good.	Child not a quiet baby. Active baby. Good sleeper. Babbled. Said first words at 13 months. Said first sentences at 15 months. Sat at 6 months, crawled at 9 months and walked at 12 months. Achieved bladder control at +/- 2.4 years and bowel control at +/- 3 years.
C2	5.4 years Female	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Caesarian section. Weighed 3.4 kgs. Did not suffer any birth injuries. Suffered from mild jaundice for which received treatment.	Quiet, easy baby. All speech milestones achieved within the normal range. Sat at 6 months, crawled at 8 months and walked at 13 months. Achieved bladder and bowel control at +/- 2 years.
C3	5.4 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural birth. Normal presentation. Weighed 3.5 kgs. Condition of child at and soon after birth was good.	Easy, happy, fairly quiet baby. Babbled from a young age. Said first words at a year. Said first sentences at 18 months. Sat at 5 months, crawled at 8 months and walked at 11 months. Achieved bladder and bowel control at +/- 2 years.
C4	5.6 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural birth. Weighed +/- 3 kgs. Condition of child at and soon after birth was good.	Happy, easy going baby, who was quiet in temperament. Speech, motor and toileting milestones achieved within average range.
C5	5.9 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Caesarian section. Weighed 3.1 kgs. Condition of child at and soon after birth was good.	Easy baby. Said first words at +/- a year and first sentences at +/- 18 months. Sat at +/- 7 months, crawled at +/- 8 months and walked at +/- 14 months. Achieved bladder and bowel control at +/- 2 years.
C6	5.8 years Male	No history of developmental difficulties.	Mother healthy apart from suffering from tick bite fever at 4 months for which she received antibiotics. Pregnancy was full term.	Natural delivery. Normal presentation. Weighed 3.8 kgs. Condition of child at and soon after birth was good.	Easy, happy, hungry baby. Speech, motor and toileting milestones all achieved within the average range.
C7	5.8 years Male	No history of developmental difficulties.	Mother generally healthy during pregnancy but had bad flu twice, for which she was prescribed antibiotics. Pregnancy 38 weeks.	Natural delivery. Presentation normal. Weighed 3.6 kgs. Condition of child at and soon after birth was good.	Cried a lot for first 5 months. Often had colds and bronchitis as an infant. Speech, motor and toileting milestones achieved within the average range.
C8	5.10 years Male	No history of developmental	Information not available.	Information not available.	Information not available.

		difficulties.			
C9	6.0 years Female	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Presentation normal. Weighed 4.0 kgs. Condition of child at and soon after birth was good.	Easy baby. Speech, motor and toileting milestones achieved within average range.
C10	5.8 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery with forceps. Normal presentation. Birth weight 4.0 kgs. Condition of child at and soon after birth was good.	Easy going baby. Speech, motor and toileting milestones were all achieved within the normal range.
C11	5.10 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 38 weeks.	Caesarian section. Normal presentation. Weighed 3.49 kgs. Condition of child at birth was good. Suffered from jaundice. Underwent UV light treatment for a few days.	Easy baby but vomited easily. Said first words at a year. Said first sentences at 18 months. Sat at 6 months, crawled at 8 months and walked at a year. Achieved bladder control at +/- 2 years and bowel control at +/- 2 and a half years.
C12	6.0 years Male	No history of developmental difficulties.	Information not available.	Information not available.	Information not available.
C13	6.5 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Emergency caesarian after long labour. Weighed 3.69 kgs. Condition of child at and soon after birth was good.	Active, vocal, confident, friendly baby. Speech, motor and toileting milestones achieved within the average range.
C14	5.10 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Normal presentation. Weighed 3.45 kgs. Condition of child at and soon after birth was good.	An easy baby, although suffered from some colic. Speech, motor and toileting milestones achieved within the average range.
C15	6.1 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 38 weeks.	Natural delivery. Normal presentation. Weighed 3.094 kgs. Condition of child at and soon after birth was good.	A fairly easy baby, who was generally contented, although he did suffer from some colic. Speech, motor and toileting milestones were achieved within the average range.
C16	6.3 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 42 weeks.	Natural delivery. Presentation normal. Weighed 4.2 kgs. Condition of child at birth good. Suffered from mild jaundice, for which received treatment.	Active baby. Speech, motor and toileting milestones were within normal limits.
C17	6.3 years Right	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 36 weeks.	Natural delivery. Normal presentation. Weighed 2.85 kgs. Was fed through a naso-gastric tube for 10 days due to no sucking reflex as 1 month	Easy baby. Speech, motor and toileting milestones were achieved within the average range.

				premature. Condition otherwise fine.	
A18	6.6 years Female	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Caesarian section, due to baby being breech. Weighed 3.4 kgs. Condition of baby at and soon after birth was good.	Easy going, happy baby. Liked to be around people. Said first words and sentences within average range. Sat at 6 months. Crawled at 9 months. Walked at 12 months. Achieved bladder control at 18 months and bowel control at 20 months.
C19	6.10 years Female	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 39 weeks.	Natural delivery. Normal presentation. Weighed 3.3 kgs. Condition of baby at and soon after birth was good.	Easy baby. Speech, motor and toileting milestones achieved within the average range.
C20	6.8 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 39 weeks.	Caesarian section. Weighed 3.6 kgs. Condition of child at and soon after birth was good.	Easy baby. Said first words and sentences within the average range. Sat at 6 months, crawled at 8 months and walked at 13 months. Achieved bladder and bowel control at +/- 3 years.
C21	6.9 years Male	No history of developmental difficulties.	Mother healthy during pregnancy but suffered from toxaemia during the last week of pregnancy. Baby born at 36 and a half weeks.	Caesarian section as was not dilating and blood pressure went up. Baby weighed 2.08 kgs. Condition at birth and soon after the birth was good. Achieved an APGAR of 9/10.	Baby felt to be of normal temperament. Speech and motor milestones achieved within the average range. Bladder and bowel control achieved at +/- 2 years.
C22	6.10 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy 37 weeks.	Natural birth. Normal presentation. Weighed 3.0 kgs. Suffered from jaundice. Received treatment under lights.	Suffered from colic for first 3 months. Otherwise an active but easy baby. Said first words within then normal range. Said first sentences at +/- 19 months. Sat at 6 and a half months, crawled at 9 and a half months and walked at 13 months. Achieved bladder and bowel control at 2 and a half years.
C23	6.10 years Male	No history of developmental difficulties.	Information not available.	Information not available.	Information not available.
C24	7.4 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Cord was around neck. Cord was cut and delivery conducted normally. Baby's condition at and soon after the birth was good. Suffered from mild jaundice. Received treatment under lights. Weighed 3.91 kgs.	Easy baby. Speech milestones achieved within the normal range. Sat at 6 months, crawled at 9 months and walked at 11 months. Achieved bladder and bowel control at 2 and a half years.
C25	7.8 years Male	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term.	Natural delivery. Normal presentation. Weighed 3.06 kgs. Condition at and soon after the	Easy baby. Said first words at +/- 14 months and first sentences at +/- 16 months. Sat at +/- 8 months, crawled at 10 months and walked at 14 months.

				birth was good.	Achieved bladder and bowel control at +/- 2 and a half years.
C26	7.9 years Female	No history of developmental difficulties.	Mother healthy during pregnancy. Pregnancy full term. Blood incompatibility present between parents. Special injection given for before pregnancy.	Natural delivery. Normal presentation. Weighed 2.85 kgs. Condition at and soon after birth was good.	Very active baby. Said first words and sentences early. Sat within average range. Did not crawl. Walked at +/- 9 months. Achieved bladder and bowel control at 2 years.

	Feeding	**Health**	**Medication**	**Hearing**	**Vision**
C1	No early or later feeding difficulties.	Fair health. Has suffered from recurrent ear infections. Has had grommets inserted. Also hospitalized for pneumonia and when drank turpentine.	Not on any medication.	Hearing tested – No difficulties experienced.	Vision tested – No difficulties detected, apart from being colour blind.
C2	No early or later feeding difficulties.	Described as a healthy child. Has had tonsils removed and grommets inserted. Required general anesthetic to stitch tongue after cut it. Sometimes suffers from allergic asthma.	Not on any medication.	Hearing tested – No difficulties experienced.	Vision tested – No difficulties experienced.
C3	No early or later feeding difficulties.	Described as a healthy child. Has had one or two ear infections. Ear health generally good.	Not on any medication.	Hearing tested – No difficulties experienced.	Vision tested – No difficulties experienced.
C4	No early or later feeding difficulties.	Described as a healthy child. Had grommets at +/- 2 years. Hospitalized for croup at +/- 3 years. Has had tonsils removed.	Not on any medication.	Hearing tested – No difficulties experienced.	Vision tested – No difficulties experienced.
C5	No early or later feeding difficulties.	Described as a healthy child. Has had a minor operation to tendons on thumbs.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C6	No early or later feeding difficulties.	Described as a healthy child. At 22 months broke arm and suffered mild concussion when fell from a height. When younger had stomach pump when swallowed blood pressure pills.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C7	No early feeding difficulties. Now he is a fussy eater.	Battled with health from birth to +/- 4 and a half years. Had a lot of upper respiratory tract infections, bronchitis and pneumonia. Had a few ear infections. Health now good.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C8	Information not available.	Information not available.	Information not available.	Information not available.	Information not available.
C9	No early or later feeding difficulties.	Has mild chest problems. Allergic to milk, egg white, avocados and bananas. Has had mumps, chicken pox and scarlet fever. Has had one ear infection. Ear health and general health generally good.	Not on any medication.	Hearing not tested – Parents not concerned.	Vision not tested – Parents not concerned.
C10	No early or later feeding difficulties.	Healthy child. Ear health has been good.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – No problems with visual

					acuity, left eye "jumps out" when a pencil approaches his nose.
C11	No early or later feeding difficulties.	Healthy child. Ear health has been good. Allergic to egg until +/- 18 months. Suffered from bronchiolitis when he was 10 weeks and roseola when he was 8 months.	Not on any medication.	Hearing not tested – Parents not concerned.	Vision tested – Possible long sightedness detected, being monitored.
C12	Information not available.	Information not available.	Not on any medication.	Information not available.	Information not available.
C13	No early or later feeing difficulties. Fussy eater. Prefers plain foods.	Healthy child. Ear health has been good.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C14	No early or later feeding difficulties.	Healthy child. Allergic to peanuts. Has suffered from some ear infections.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C15	No early or later feeding difficulties.	Healthy child. Has suffered from bouts of croup, for which he has been hospitalized twice. Has had a few ear infections.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C16	No early or later feeding difficulties.	Healthy child. Has suffered from the occasional ear infection. Otherwise ear health good.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C17	Fed through a naso-gastric tube for 10 days and then 'weaned' onto the breast.	Healthy child. Has suffered from some ear infections.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C18	No early or later feeding difficulties	Healthy child. Ear health has been good.	Not on medication.	Hearing has not been tested - Never been a concern regarding hearing.	Vision has not been tested - Never been a concern regarding vision.
C19	No early or later feeding difficulties.	Healthy child. Ear health has been good.	Not on medication.	Hearing has not been tested - Never been a concern regarding hearing.	Vision has not been tested - Never been a concern regarding vision.
C20	No early or later feeding difficulties.	Generally a healthy child. Has experienced a number of ear infections and tonsil problems. Grommets have been inserted.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C21	No early or later feeding difficulties.	Described as a healthy child. Ear health has been good.	Not on medication.	Hearing tested – No difficulties detected.	Vision tested – No difficulties detected.
C22	No early or later feeding difficulties.	Milk allergy – Used soya for first year. Described as a healthy child. At +/- 3 to 6 months had an obstruction of the nasal passage, which was operated on. Has had his tonsils removed. Has suffered from a number of ear infections.	Not on medication.	Hearing has not been tested - Never been a concern regarding hearing.	Vision has not been tested - Never been a concern regarding vision.

C23	Information not available.	Information not available.	Not on medication.	Hearing has not been tested - Never been a concern regarding hearing.	Vision has not been tested - Never been a concern regarding vision.
C24	Initially did not have a strong suck. He is a fussy eater and won't try anything new.	Described as a healthy child. Suffered from a number of ear infections linked to colds and flu until he was +/- 2 and a half years.	Not on any medication.	Hearing has not been tested - Never been a concern regarding hearing.	Vision tested – No difficulties detected.
C25	No early feeding difficulties. Fussy eater. Does not like meat very much. Enjoys cereals, fruit and cheese and very little else.	Described as a healthy child. Has suffered from gastroenteritis, pneumonia and a number of bouts of otitis media. Hospitalized at +/- 8 months for diarrhea and at +/- 2 years for pneumonia. Has had grommets inserted.	Not on any medication.	Hearing tested – No difficulties detected.	Vision tested – Has a deficit of +/- 30% in right eye due to 'lazy eye'. Left eye has minimal sight deficit. Wears glasses. Poor depth perception.
C26	No early feeding difficulties. A bit of a fussy eater. Does not like to eat fruit and vegetables.	Described as a healthy child. Used to suffer from eczema. Suffered from chronic ear infections as a baby and young child but outgrew this. Had two sets of grommets, one at 8 months and one at +/- 2 years. When younger green stick fracture to right arm.	Not on any medication.	Hearing has not been tested - Never been a concern regarding hearing.	Vision tested – No difficulties detected.

	School/Therapies received	**General**	**Home language/Family history**
C1	Mainstream school None	**Communication:** Communicates well. **Behaviour:** Interacts well with peers. A bit shy with new people. Gentle, sensitive, motivated, amusing, insightful, empathetic, generous child. Also self-critical and driven to complete tasks. **Play:** Engages in creative, imaginative play. Also construction type play. Loves riding bike and listening to stories. **Other:** Coping well at school.	English Lives at home with both parents and younger sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C2	Mainstream school None	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Domineering personality. Likes to get her own way. Sensitive and very perceptive. Likes to please and thrives on praise. Outgoing and loving. **Play:** Enjoys creative play. Has an amazing imagination. **Other:** Coping well at school.	English Lives at home with both parents and older sister. One of child's cousins had a hearing difficulty, which has been corrected. No family history of speech, language, learning, psychological and psychiatric difficulties.
C3	Mainstream school None	**Communication:** Communicates well. **Behaviour:** Interacts well with peers. Popular with peers. Gets on well with older and younger children and adults. Described as an friendly and sensitive child. **Play:** Plays with a variety of things. Engages in pretend play. Likes active outdoor play with siblings or friends. **Other:** Coping well at school.	English Lives at home with both parents and older sister and younger brother. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.

C4	Mainstream school None	**Communication:** Communicates well. **Behaviour:** Interacts well with peers. Gets on well with older and younger children and adults. Popular and well liked. Described as an easy going, social, talkative child. **Play:** Plays with a wide variety of things. Engages in pretend play. Loves ball games, such as cricket and soccer. Likes drawing and building with lego. **Other:** Coping well at school.	English Lives at home with both parents and older brother and sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C5	Mainstream school None	**Communication:** Communicates well. **Behaviour:** Gets on very well with peers. Gets on well with older and younger children and adults. Described as an outgoing, friendly child. **Play:** Enjoys creative/pretend play. Enjoys sport. Enjoys being read to. **Other:** Coping well at school.	English Lives at home with both parents and two older sisters. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C6	Mainstream school None	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Gets on well with older and younger children and adults. Happy, contented child with a good sense of humour. **Play:** Plays with a wide variety of things. Engages in pretend play. Loves outdoor play. Loves making things. Enjoys computer games. **Other:** Coping well at school.	English. Lives at home with both parents and three older sisters. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C7	Mainstream school Consulted a speech therapist for a short for a short period of mild non-fluency at +/- 3 years.	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Gets on well with older and younger children and adults. Initially shy with people he does not know. Easy going, active, energetic child with a good sense of humour. **Play:** Plays with a wide range of things. Engages in pretend play. Loves sport. **Other:** Coping well at school.	English Lives at home with biological mother, stepfather, older sister and younger half sister. Biological father died when child was 3 years. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C8	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Easy going, friendly child. **Play:** Plays with a wide variety of things. Engages in pretend play. **Other:** Coping well at school.	English. Lives at home with both parents. An only child.
C9	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Gets on well with older and younger children and adults. Friendly, outgoing child. Eager to please, willing to help. **Play:** Loves to use her imagination in her play. Very creative. **Other:** Coping well at school.	English Lives at home with both parents. Has two grown up half sisters. Only child living at home. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C10	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Plays well with peers. Interacts well with older and younger children and adults. Confident, happy, loving, humorous child. **Play:** Plays with a wide variety of things. Engages in imaginative play. **Other:** Coping well at school.	English Lives at home with both parents and older sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.

C11	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Plays well with peers. Interacts well with older and younger children and adults. Described as a confident, outgoing, gregarious, caring child. **Play:** Prefers construction play to creative play, but will engage in creative play. **Other:** Coping well at school.	English Lives at home with both parents and two younger brothers. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C12	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Plays well with peers, although more a follower than a leader. Can be a bit reticent with people he does not know. An easy child. **Play:** Plays with a wide variety of things. **Other:** Coping well at school.	English Lives at home with both parents and older brother.
C13	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Socializes well with peers. Gets on well with older children and adults. Outgoing, easy child, who can be sensitive and is able to adapt to different situations. **Play:** Enjoys creative, imaginary play. Will also engage in construction play. Plays with a wide variety of things. **Other:** Coping well at school.	English Lives at home with both his parents and his younger sister. Both maternal uncles experienced some learning difficulties. No family history of hearing, psychological and/or psychiatric difficulties.
C14	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Socializes well with peers. Interacts well with younger and older children and adults. An easy, gentle child, who knows what he wants. **Play:** Loves creative, pretend play. Loves playing with other children. **Other:** Coping well at school.	English Lives at home with both his parents and his younger brother. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C15	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Socializes well with peers. Interacts well with younger and older children and adults. Affectionate child. Has a good sense of humour. Very interested in things around him. Energetic. **Play:** Plays well with a wide range of things. **Other:** Coping well at school.	English Lives at home with both parents, paternal grandmother and older sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C16	Mainstream school. None	**Communication:** Communicates well. **Behaviour:** Socializes well with peers. Interacts well with younger and older children and adults. Described as a strong charactered, social child, who likes to get his own way. Loving and affectionate. **Play:** Good imaginative play. Also enjoys drawing. Enjoys playing games with other children, as well as sport. **Other:** Coping well at school.	English Lives at home with both parents and two older brothers. One older brother required a short period of articulation therapy. No other family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C17	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Interacts well with older and younger children and with adults. Described as a sociable, happy, gentle child. **Play:** Plays with a wide variety of things. Does engage in pretend play. Enjoys playing with other children. **Other:** Coping well at school.	English Lives at home with both his parents and his younger sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.

C18	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Socializes well with peers. Interacts well with younger and older children and with adults. Described as a happy, well adjusted child. Enjoys learning. Has a good sense of humour. **Play:** Engages in fantasy play. Likes drawing. Likes playing with other children. **Other:** Coping well at school.	English Lives at home with both her parents. Is an only child. No family history of speech, language, learning and hearing difficulties. Maternal grandmother suffers from manic depression.
C19	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Interacts well with younger and older children and adults. Strong personality. Outgoing with peers. Shy with adults. Can be dominant. **Play:** Plays with a wide variety of things. Prefers constructive play, but does engage in pretend play. Enjoys playing with other children. **Other:** Coping well at school.	English Lives at home with both her parents, her older and her younger sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C20	Mainstream school. Received short term speech therapy as said w/r.	**Communication:** Communicates well. **Behaviour:** Gets on well with his peers. Interacts appropriately with younger and older children and adults. Sensitive, well behaved child. **Play:** Plays with a wide range of things. Enjoys constructional play, but does engage in pretend play. Plays well with other children. **Other:** Coping well at school.	English Lives at home with both parents and two older sisters. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C21	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Interacts well with older and younger children and with adults. Can be a bit reserved but confident in a quiet way. **Play:** Loves to play with lego, engage in creative play and to look at books. **Other:** Coping well at school.	English Lives at home with both parents and younger sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C22	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Gets on extremely well with peers. Interacts well with older and younger children and with adults. Happy, outgoing child. **Play:** Plays creatively, enjoys lego, painting, drawing, colouring and active play. **Other:** Coping well at school.	English. Lives at home with both parents and older sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C23	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Interacts well with peers, older and younger children and adults. **Play:** Plays with a wide variety of things. Can engage in pretend play. **Other:** Coping well at school.	English Lives at home with mother, three siblings and aunt's family. Maternal cousin has a language and auditory processing difficulty.
C24	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Plays very well with peers. Interacts very well with older and younger children and adults. Described as a gentle, placid child, who can also be very determined. **Play:** Plays well with lego and enjoys outdoor sports. Does play creatively. **Other:** Coping well at school.	English Lives at home with mother, father and younger sister. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.

C25	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Gets on well with peers. Interacts well with older and younger children and adults. Even tempered, easy-going. **Play:** Enjoys creative, constructional and active play. Likes to play with brother and friends. **Other:** Coping well at school.	English Lives at home with mother, father and older brother. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.
C26	Mainstream school. None.	**Communication:** Communicates well. **Behaviour:** Described as having a strong personality. Strong willed. Can be very sweet and caring. **Play:** Loves creative/pretend play. She loves to play with her friends. **Other:** Coping well at school.	English and a little French. Lives at home with her mother, father and older brother. No family history of speech, language, learning, hearing, psychological and/or psychiatric difficulties.