

P2C2E

Exploring the potential of
social awareness with a
special needs group through
internal peer interaction
and buddy system

Pallavi Chander
171

Magic Puddles-
Arts Based Therapy
Center for Special
Needs



Arts Based Therapy

Index

Section 1

Abstract.....	2
----------------------	----------

Section 2: Introduction

2.1 The larger Problem.....	3
------------------------------------	----------

2.2 Diagnoses of Individual Client needs.....	4
--	----------

2.3 Literature Review.....	13
-----------------------------------	-----------

2.4 Hypothesis.....	15
----------------------------	-----------

Section 3: Methods

3.1 Eligibility Criteria for Participants.....	16
---	-----------

3.2 Logistics.....	16
---------------------------	-----------

3.3 Data sources and Data Collection Protocols.....	17
--	-----------

3.4 Methods Used.....	19
------------------------------	-----------

Section 4: Results

4.1 Results Summary.....	20
---------------------------------	-----------

4.2 Results Detailed.....	21
----------------------------------	-----------

Section 5: Discussion

5.1 Limitations.....	45
-----------------------------	-----------

5.2 Learnings.....	46
---------------------------	-----------

5.3 Future.....	48
------------------------	-----------

Section 6: Appendix.....	49
---------------------------------	-----------

Section 7: Acknowledgements.....	77
---	-----------

Abstract

The research project had a heterogeneous group of eight children with special needs (ASDs, Developmental Delay due to Epilepsy and Mental Retardation). The research was conducted to explore social awareness between children with developmental delays/special needs to create buddying models amongst them thereby creating an environment that facilitates internal peer interaction and communication which would facilitate peer learning and socio-cognitive learning.

The research study focussed on Social Dynamics domain and Speech domain as the main therapeutic goals for the study group. The EPR-based tool was used to assess the overall dramatic development of the study group. The results emerged at the end of the project marked improvement in the chosen domains as well as other domains.

Children with Mental Retardation and Developmental Delay due to Epilepsy were found to be more social than the children in the autistic spectrum. Using ABT as the basis for the sessions, the autistic children were buddied by their counterparts during most socio-cognitive sessions. In turn, the autistic children buddied their counterparts with movement and speech related sessions. In some cases the autistic children started initiating play and the children with Development Delays pushed themselves in areas of gross and fine motor, vocalization of speech and communication. The children were allowed to interact with least amount of intervention and minimum facilitation.

The structure of ABT worked well not only as a basis for the various arts form by providing fluidity to the methods but also provided a detailed and holistic assessment and evaluation tool, including the physical, the intellectual and the emotional growth of the children. It is inclusive in monitoring the progress of special needs population both verbal and non-verbal.

2.1 Larger Problem

The astounding 2000% increase in autism since Leo Kanner reported it in 1943, has left establishments baffled and in a quandary because it has not yet been able to put a finger on the cause and the global nature of the problem.¹ In India we have not yet conducted any large scale random studies on its prevalence.

World Health Organization estimates that 10% of the world's population has some form of mental disability and 1% suffers from severe incapacitating mental disorders.² Community-based surveys conducted during the past two decades in India showed that the total prevalence of psychiatric disorder was around 5.8%.³ In contrast, recent National Sample Survey Organization report revealed prevalence as little as 0.2%.⁴

But in land of over 1.22 billion one can only imagine the growing rate of children with disabilities both in urban and rural India.

The study group is a heterogeneous group of children with varied special needs, Autism Spectrum Disorder, Mental Retardation and Developmental Delays due to Epilepsy. Imagination (pretend play), Communication and Social skills form the triad of impairment for children with developmental delays.

Peer mentoring and buddy programs for students with physical and developmental disabilities, chronic health conditions or other challenges have been shown to benefit the social-cognitive growth of their mainstream peers as well as establishing long lasting relationships and improving academic achievement for both groups. Children with significant disabilities are most often excluded from these opportunities because teachers, administrators and parents lack experience or knowledge of successful programs and underestimate the benefit to the children involved.

The primary concern of parents of children with developmental delay is their inability or difficulty in peer and social interaction; it forms the basis to social-cognitive growth and behaviour. The genuine concerns from the caregivers, in most cases being the parent/s is related to the survival and coping mechanisms of a child in absence of them.

In my action research project I intent to work on the Social Dynamics and Speech domain to facilitate positive shifts in the above mentioned triad and evaluate improvement with their EPR using Arts Based therapy. I intent to facilitate and track peer interaction and buddy models within the special group.

The action research project worked on the Social Dynamics and Speech domain with the study group, facilitated sessions and monitored shifts in the above mentioned triad. The research evaluated improvement with their EPR using Arts Based therapy. The research period facilitated and tracked possibilities of peer learning through internal peer interaction and buddy models.

2.2 Diagnosis of Individual Client Needs:

CLIENT 1: Yogesh R

Family Background: 19.2yrs, He is the first child of Jayanthi and Jaganatha Raju. He has a 15 year old younger brother, Nagesh. He belongs to a lower middle class family and at this point finds it hard to pay his school fees. He was diagnosed with Microcephaly with a mental age of about 4-5 years. He has a slight deformity with his head. He is non-verbal but produces sounds to communicate his needs. Milestones delayed due to developmental delay.

Academic and Rehab Teacher's Input:

- Initially Yogesh was very shy and timid, but now he has made attempts to socialize with his peers and facilitators.
- Yogesh has a good ear for music and sways to the rhythm and participates well in circle time. He has a good recall memory and remembers the actions and sequence of songs.
- He enjoys movement based sessions and tries to crawl, jump and roll.
- He enjoys group and partner sessions. He brings in a lot of energy into the sessions and it spills over to the other children who follow him. He also helps the facilitator in getting the children into the activity if they stray.
- He does not chew his food and thus does not eat anything in school. He does have a speech problem, he produces sounds to communicate.
- Yogesh does have some sensory issues with textures and sound. He does not like working with paints, resists drumming sessions but sits to observe the sessions from outside the class. He is very sensitive to the noise and the textures of the drums or any other instruments.
- Yogesh did not show any aggressive behaviour initially. Now, he protects and defends himself when required. He complains to the facilitator when a child pushes him. Lately he has started showing some aggressive behavior, he insists on hitting back the child who has hit him in a very aggressive manner. It has become difficult to confront him and calm him down at times.

Medical Background: Yogesh has been diagnosed with Microcephaly, Mental Retardation with Developmental Disorder.

Weakness:

- Yogesh has poor eye sight and struggles to examine materials during activities. He cannot see clearly with his right eye. But he looks at it very closely and once he figures it, he tries to do the activity.
- He has lately started getting very aggressive with any child who hits or wacks him, even if friendly. He defends himself by being very aggressive with child and does not give up till his anger calms down.

Strengths:

- He has become very sociable and helps out his peers and younger ones during activities.

Creation: Yogesh's main area of need is Speech- vocalisation of sounds. His second area is gross motor and fine motor development. The third area of focus will be peer interaction, handling peer situations and self reliant in facilitating simple activities and chores for the younger children.

Client 2: Surabhi V

Family Background: 6.11 years, she is the only child born to Shashikala and Venkatesh J. She belongs to a middle class family. She is diagnosed with mild mental retardation and speech defect, delayed milestones and behavioural issues. Her cognitive capacity is good. Has limited peer interaction and is undergoing speech therapy.

Academic and Rehab Teacher's Input

- She likes to interact with her facilitators but not her peers. Surabhi enjoys group and partner sessions, she constantly seeks approval from the facilitator.
- She loves listening to songs and requests songs during circle time and sessions. She enjoys dancing and movement based activities.
- She also enjoys visual art activities. She enjoys painting herself in the process. She also helps the facilitator with cleaning up and snack time.
- He enjoys role play and often likes to play with a doll or requests her facilitator to play with her.
- Academically she resists writing, knows letters, numbers and shapes and makes sounds and gestures to answer.
- She has got into a habit of using 'bad' phrases when she doesn't get her way. She does try to get the attention of her facilitators by either pulling their hair or scratching and pinching. She also tends to laugh after the incident and resists any reinforcing.
- She tends to word her speech in reversal, like good morning as 'doog mooing'.

Medical Background: Surabhi has been diagnosed with Mild Retardation and Childhood Apraxia of speech.

Weakness:

- With speech delay she has developmental delay in learning letters, words and has problems when learning to read, spell and write. She also finds it hard to express herself and her needs. But makes attempts.
- She does have some behavioural issues in trying to seek attention from the facilitators; she either pulls their hair or scratches and pinches. She also tends to laugh after the incident and resists any reinforcing.

Strengths:

- She loves music, action songs and has a good memory of the sequences and associates things to its uses. She enjoys role play and displays a lot of love towards her facilitators.

Creation: Surabhi's main focus at this point will be to initiate peer interaction. Use her role play with her peers and reduce her attention seeking need which usually leads to behavioural issues. Her second area will be to improve her speech in vocalisation and communication, both verbal and non verbal.

Client 3: Krishanendu Chatterjee

Family Background: 7.2 years, he is the only son of Indrani Chatterjee and Kaustabh Chatterjee. He belongs to a middle class Bengali family. He is diagnosed with pervasive developmental disorder. He is of a low IQ and also has speech delay. He is in echolalia stage. Motor development and coordination is not age appropriate.

Academic and Rehab Teacher's Input:

- He enjoys listening to the songs during circle time. He repeats the songs later. He enjoys drumming sessions and often hits the drums in excitement.
- Babu communicates mostly through babbles and sounds; He is able to communicate his needs through either gestures or voices out in single words like, 'Toilet' or 'water'.
- He enjoys working with colours but prefers to paint, usually himself, especially his face. He resists using crayons and pencils. He often puts material inside his mouth.
- He does not recognise letters, numbers or shapes. He repeats when shown, but does not recognise them as symbols, in isolation.
- He does show symptoms of Poor Muscle Tone And/ Or Coordination – Frequently slumps, lies down and leans and struggles to lift himself when on stomach. Prefers to lie on his back. Sits in a 'W' position and finds it difficult to sit criss-cross, Fatigues easily during movement based activities. He resists jumping, crawling, catching balls or following simple body movements.
- He does bite and scratch the facilitator when he is in a bad mood or disapproves of an activity. He calms down when given a hug or when the facilitator talks or sings to him

Medical Background: Krishanendu has been diagnosed with Pervasive Developmental Disorder.

Weakness:

- Issues with his muscle and limbic coordination, he has to be forced to sitting or standing postures during sessions.
- He does tend to tighten his muscles, pinch and scream when he is forced to do something he does not like.

Strengths:

- He likes songs and responds to instructions when addressed to him but only when he is in the mood for it.

Creation: Krishanendu's main area of focus will be to improve his social dynamics with peer interaction and turn taking. Second area of importance will be articulation and expression through speech. His third area of focus will be gross and fine motor skills using methods he likes, drumming, songs and visual arts.

Client 4: Chathurika Yuvraja

Family Background: 11.8 years old, she is the second daughter of Shobita and Yuvraja, they belong to a fairly comfortable middle class background with recent financial issues. She is epileptic and has developmental delays because of condition. Chathurika has an older sister Sai, who also has the same condition.

Academic and Rehab Teacher's Input:

- Chathurika is very social child and loves to interact with her peers and facilitators.
- She enjoys listening and acting out songs and attempts to sing. She loves playing instruments and participates in activities very enthusiastically. She loves stories and asks questions frequently too. She has explored levels of Embodiment and Projection but not so much with Role-Play.
- Her feet do cause some concern when she tries to run fast or jump during movement based activities, but she still tries.
- She enjoys fine arts based activities and actively participates. Her pincer grip isn't too firm.
- She does have delays in speech and vocalisation. She finds it hard to open her mouth and make certain sounds (like ahhh, oohh, bba, rrha). She cannot blow through her mouth or chew very well.
- Academically, she knows her letters and numbers (1-10) orally, she is at drawing lines and circles with her writing skills.

Medical Background: She is diagnosed with Epilepsy, takes in antiepileptic medication – (Encorate chrono - 400mg - 1-0-1, Clonotril - 0.5mg 1-0-1, Keppra - 5ml-0-5ml)

Weakness:

- Chathurika does get possessive sometimes and constantly seeks approval from the facilitators. She can get comparative with Sai, her sister. And sometimes, can get fussy to do an activity.
- She does have problems with speech, she has issues in vocalisation and pronunciation while singing and talking.

Strengths:

- She is a very social child and willingly interacts with her peers and facilitators. She has an infectious energy the minute she enters a room she greets everyone with a hug.
- She enthusiastically participates in all the activities and this encourages the rest of her peers to participate.
- She often challenges and pushes herself to do some activities which might be physically tough for her (jumping, crawling, running)

Creation: Chathurika's first area of focus will be to facilitate and channelize peer interaction and get her to buddy with younger children. Her second area will be to help her vocalisation of sounds, vowels and consonants mainly so she can produce more words during speech and singing. Her third area will be to improve her Embodiment, Projection and Role.

Client 5: Sai Yuvraja

Family Background: 13.9 years old, she is the first daughter of Shobita and Yuvraja, they belong to a fairly comfortable middleclass background with recent financial issues. She is epileptic and has developmental delays because of condition. Sai has a younger sister, Chathurika, who also has the same condition and is in the same school and group.

Academic and Rehab Teacher's Input:

- Sai, initially did not interact with her peers or facilitators. She used to cry a lot for her mother. But has started making attempts by greeting her facilitators.
- She loves listen to songs and imitates the actions for them sometimes. She does not move too much during movement based activities, but smiles and stares at her peers.
- She has to be facilitated to participate in activities constantly by either calling her name or physically moving her around. She does tend to stand and stare most times. She does have problems with physical agility because of her feet, so she tends to move around slowly.
- She does like to paint, colour with crayons and insists in using pencils. Her pincer grip is not too firm.
- Academically she recognises letters, numbers and shapes. She likes playing with peg boards and listening to stories.
- She does drool and does not chew her food properly. She has delay in speech. She cannot vocalise some sounds (bba, ppa, vva, ss, dda)
- She does cry a lot and seeks for attention. She does not like to be separated from her sister, Chaturika.

Medical Background: she is diagnosed with Epilepsy, takes in antiepileptic medication – (Encorate chrono - 400mg - 1-0-1, Clonotril - 0.5mg 1-0-1, Keppra - 5ml-0-5ml)

Weakness:

- She cannot move around too fast or jump and run because of her feet which are **slightly deformed**.
- She does seek approval from her facilitators and often cries.

Strengths:

- She likes her peers and is fascinated by them. This can be used to facilitate interaction.
- She likes songs and movement based activity.

Creation: Sai's main area of focus is peer interaction and social dynamics. Her second area is Speech – vocalisation, articulation and expression along with some focus to channelize her EPR more towards Projection and Role-play as she is good with Embodiment and her third will be gross and fine motor development.

Client 6: Azraa Fatima

Family Background: 7.3 years, she is the first daughter of Fareeda Begum and Azeez Ulla Roshan. She has a 10 year old neuro-typical brother, MD Azmath Roshan. Her parents are from a struggling family background.

Fatima is diagnosed as highly autistic and is non-verbal. She has echolalia stage and has poor eyesight. She gets seizures once in a month where her limbs stiffen for about 10-15secs, after which she usually lies down and sleeps.

Academic and Rehab Teacher's Input:

- Fatima is a nonverbal child who is pretty much on her own. She responds to her name sometimes and is at echolalia stage. She responds mostly to Hindi and some words in English.
- She repeats songs and words on her own; she does not do so when asked to.
- She is sensitive to certain textures like drum skin, water, sand and clay, due to which she resists exploring them.
- She does have poor eye sight and moves around the space with a memory of the spatial awareness.
- She is not toilet trained but eats only certain foods on her own.
- She does hit her head against any surface when she is either bored or irritated. She also bites and pinches. She does move her fingers frantically or rocks her body or sometimes hums repetitively. She often cries when irritated or when she needs something, but does not know how to express her needs/wants.

Medical Background: epilepsie - 5ml daily x2, seizures once in a month, stiffening of limbs (10-15secs), lie down and sometimes sleeps

Weakness:

- Has poor eyesight and is sensitive to textures.
- She does tend to hurt herself by hitting her forehead against any surface when irritated. She also tends to bite and pinch.

Strengths:

- She likes songs and music. She sometimes moves to the pulse of the music/song.

Creation: Fatima's main area of focus will be address her sensory issues so she can get used to some textures like wet paint, sand, drum skin, etc; to channelize her EPR starting with Embodiment, then Projection to begin with. Second area of focus will be Speech-vocalisation, expression and articulation. Her third will be motor development.

Client 7: Mohammed Faraaz Khan

Family Background: Farhaaz is the first son of Nazia Khan and Aswath Fazil Khan. He has two neuro-typical siblings, 4 year old brother, Luqman Khan and 2 year old sister, Khadeeja Khan. Farhaaz is diagnosed as Autistic. He is non-verbal but communicates through gestures and symbols.

Academic and Rehab Teacher's Input:

- Farhaaz is nonverbal but communicates through gestures and symbols. He does speech sounds and babbles. He does not interact with his peers or facilitators unless facilitated.
- He does not sing or imitate actions for songs during circle time. He does not initiate participation unless constantly facilitated.
- He does tend to be restless and walks constantly walks around the space during sessions. He does have an obsession for things that come out of tube like paste.
- He does paint and play the drums when facilitated. He has to be hand held, sometimes he attempts to imitate.
- He likes to look at books and often gestures at pictures and flash cards. He does not recognise letters or numbers but likes looking at them in books.
- He sometimes bites, scratches, pinches and slaps either himself or his peers and facilitators when frustrated or irritated, usually when he forced to do something. He calms down when he is firmly reinforced, but cries till he is cajoled with sweet words.
- Farhaaz has eczema on his arms and he tends to scratch or pinch when this irritates him. He also tends to spit and play with his saliva.

Medical Background: Farhaaz has been diagnosed to be in the autistic spectrum and has skin eczema on his arms, which he tends to scratch.

Weakness:

- He does get uncontrollable when he has his outbursts and needs to be calmed down with loving insistence.
- He tends to put most things in his mouth, like crayons.

Strengths:

- He responds to instructions with loving insistence.

Creation: Farhaaz's main focus will be social and peer interaction. Second area of focus is vocalisation of sounds and articulation and self-expression.

Client 8: Akshay Vinod Kumar

Family Background: 7.9 years, he is the first son of Vinod Kumar and Divya. He has a 4 year old sister, Anika. He has been diagnosed to be in the autistic spectrum, he is verbal. And is lactose intolerant.

Academic and Rehab Teacher's Input:

- Akshay initially does not interact with his peers but tries to do so with his facilitators and communicates only when he needs to.
- He enjoys playing the drums and visual art activities.
- He likes structure and does take some time when something new is introduced. He often cries till things are explained to him.
- Academically he knows his letters, numbers, shapes and colours. He likes computer and story sessions.
- He is mostly by himself in class. He participates in group sessions and partners up, when facilitated.

Medical Background: He is diagnosed with autistic spectrum disorder.

Weakness:

- He is mostly by himself and does not initiate any peer interaction even when other children approach him.
- When his routine is broken he does scream and shout, often cries till he gets what he needs.
- He does tend to push or jump on other children in class. He does have to be constantly got into the group, he does tend to lie down and get lethargic.

Strengths:

- He is a happy child and hugs a lot. He has good cognition and follows one-step and two-step instructions.

Creation: Akshay's main focus will be buddy him with other children to improve his social dynamics. Second focus will be to concentrate on getting him speak and articulate himself. Third will be to concentrate on gross motor activities.

2.3 Literature Review

Play and Drama Therapy

The body is the primary means of learning (Jennings 1990), all other learning comes through the body. So children with bodily trauma need extended physical play in order to rebuild a healthy and confident body. Embodiment Projection Role (EPR) charts the 'dramatic development' of children, which is the basis of the child being able to enter the world of imagination and symbol, the world of dramatic play and drama¹.

Play is the basis for the child's emotional, cognitive and social development. Through dramatised playing the child learns to develop their physical confidence, their imagination, and their social responses.²

Children with autism have great difficulty in relating to children around them. Some do develop closeness with adults who are sensitive to their needs but most often develop obsessive attachment to them and when separated, suffer from separation anxiety and panic attacks. One prominent characteristic is they do not develop relationships or friendship networks with their peers. Since there is no single test for autism, inability to form friendship with age peers is a very defining test³.

Social thinking is what we do when we interact with people: we think about them. And how we think about people affects how we behave toward them, which in turn affects how others respond to us, which in turn affects our own emotions. Research, however, supports the effectiveness of addressing the thinking required prior to social communication and engagement with specific strategies. The '*Journal of Autism and Developmental Disorders*' published a report on methodologies specifically addressing deficits in the social thinking process, finding that they are successful at teaching the ability to interact socially in people with social limitations who have *near-normal to way above-normal* intelligence.

While these challenges are commonly experienced by individuals with high-functioning autism, Asperger's, ADHD, nonverbal learning disorders and similar diagnoses, children and adults experiencing social learning difficulties often have received no diagnosis.

Across the fields of psychology, education, speech and language evaluations, IQ tests and other standardized tests are usually inadequate for assessing the depth and complexity of a social learning disability. A child's ability to do well on most standardized testing in no way proves or disproves the possibility that he or she may have a significant learning disability related to social thinking⁴.

Music Therapy

In a study by the Bio Med Central Complementary and Alternative medicine on 'Effects of Music Therapy in the Treatments of Children with Delayed Speech Development', they found that music therapy may have a measurable effect on the speech development of children through the treatment's interactions with fundamental aspects of speech development, including the ability to form and maintain relationships and prosodic abilities. Thus, music therapy may provide a basic and supportive therapy for children with delayed speech development.

Adapting music therapy as a medium of communication and expression can be beneficial in activating and supporting mental and psycho-physical recovery. In a study by Duffy and Fuller (2001) found that an 8-week music therapy intervention in social skills development in moderately disabled children resulted in an increment in terms of turn-taking, imitation and vocalization¹.

Developmental delay often accompanies delayed speech development. Language development is one of the most significant processes of early childhood development. Children with delayed speech development are more at risk of acquiring other cognitive, social-emotional, and school-related problems. Music therapy appears to facilitate speech development in children, even within a short period of time. Gallagher found that "studies of children with language impairment have reported emotional and behavioural problems in 50-75% of that population" ². According to findings of Aldridge, music therapy is an approach that may facilitate significant advances in speech development and communication skills, particularly in children with autism³.

In a study by Antonietta Mongillo with non-verbal clients with development delays, 'Vocalizations appeared to play an important role. The client's voice was the main form of participation and communication.' In her research he refers to Boxill (1985) who in her work with clients diagnosed with developmental delays, identifies the implications of using the voice in communication. She observes that, 'singing to, for, and with the client is a means of contact and communication that stimulates the awareness of self and others. To sing or hum a melody is to use the musical instrument that is an extension of the self – the human voice...Even on the most elementary level, singing and musical vocalisation mobilise energy and are a means of focus that create feelings of wholeness, for individual and groups' (p.101).

She also refers to Wigram, Nygaard and Ole Bone (2001) who also say music is a medium for basic contact in communication with clients with developmental delays. They outline levels of contact that include specific musical techniques (e.g. matching, mirroring and dialogue). For children with communication disorders, they specify response-evoking techniques that include imitation, turn-taking, pausing or 'freezing', expectation and variations on a theme³.

The aim of this study is to explore positive shifts with speech and vocalization through use of music therapy in children with delayed speech development. Songs and instruments will be used to explore the clients' self and connect to others to facilitate social dynamics amongst the study group.

Art therapy

Educational systems seem to focus more on the cognitive and intellectual paradigm but somewhere fail to address a child's emotional quotient. This is when we fall back on the arts. Art therapy is an unconscious form of therapy that bypasses the powerful and rational brain and goes directly to the healing power of the heart. Through the creation of spontaneous images or objects, the unconscious surfaces and is made conscious, visually available for the rational mind to look at.

Individuals with developmental disabilities have deficits in intellectual and emotional functioning, physical deformities, or inability to communicate verbally. Emphasis is often placed on developmental work and skill training without adequate regard to emotional, unconscious and creative drives. As many individuals with developmental disorders are unable to participate in insight oriented psychotherapy, art therapy is in a unique position of being able to offer psychotherapy in a mixed verbal and non-verbal, direct, gentle and less threatening form¹.

Art making can be a particularly effective therapy for people with autism. Because they tend to have difficulty processing sensory input and are often non-verbal, autistics respond well to visual, concrete, hands-on therapies.

With regards to autistic children, art therapy can help to increase communication and social skills, develop a sense of individuality, build of relationships, and facilitate sensory integration. Children on the autism spectrum struggle with these challenges to varying degrees, but communication in general is probably the most difficult challenge of all. To understand how art therapy assists communication, we need to understand precisely what "communication" means for the autistic child. It does not just mean language, but rather the totality of the communicative framework that appears from infancy onward. The expressive aspects of art therapy thus help autistic children communicate by providing an additional method for interpersonal interaction².

Depending on the area of therapeutic focus, art therapy can facilitate a variety of therapeutic goals:

- Physical and occupational goals: improving motor skills
- Cognitive goals: improvement of memory, prioritization, planning, organisation
- Psycho-social goals: improving inter-personal skills, expression of feelings
- Emotional goals: improving impaired control, easing anxiety, easing depression.

2.4: Hypothesis:

P2C2E

This project involves Arts Based Therapy to try and foster social awareness between children with developmental delays/ special needs by creating buddy models amongst them thereby creating an environment that facilitates internal peer interaction with minimal one-one intervention.

3.1: Eligibility criteria for participants:

The selected candidates belong to a heterogeneous group with varied special needs. The children belong to lower and upper middle class families. They have been a part of the learning environment for 6-18 months. All the children are in the mental age of 6 to 10 years. There were 6 children in the beginning. Of these 6, three moved to other schools. The group had to be reconstituted and the final group had eight children.

The criteria for selection were based on their peer interactions levels. Four of the children were in the autistic spectrum and the other 4 were with developmental delays and epilepsy with mental retardation. Three out of eight were speech impaired while the other five had speech delays. There was a clear shift of focus from sensory domain to speech domain due to the reconstitution of the group as the second therapeutic goal. The first remained on social dynamics to co-relate with the hypothesis.

Demographics of the group:

Age	6.5 to 19.5 years
Gender	4 girls and 4 boys
Background	All from middle class homes one from lower middle class home.
Other Relevant Info	Some children are epileptic and come into sessions on high dosage of medication. A maid is on stand-by outside the class for emergencies.

3.2: Logistics

Space: A 15' x 15' room with three windows and a toilet.

Organisation: Magic Puddles – Arts Based Therapy Center for children with Special Needs,

J.P.Nagar 3rd Phase, Bangalore

Duration/ frequency: The sessions will be conducted thrice a week in June, August and four times a week in July.

Start date: June 11th 2012

End date: August 31st 2012

3.3 Data Sources and Data collection protocols:

Data Collection Formats: (See Appendix A)

The Data Collection formats will be used to assess the progression in the following areas:

- **Appendix A1** – Social and Communication Developmental Observational Chart to monitor any 'Behavioural' changes with regards to social dynamics over time at school and home. Questionnaires were filled by parent/s, teachers and facilitator.

The general questionnaires were filled by all three information providers in June. The Parent Questionnaire will be revisited after a year by the centre to see any marked progression, whereas the Teacher and Facilitator's responses will be compared and monitored during the action research period.

- **Appendix A2** – Oral Motor Observational Chart to monitor any changes regarding 'speech' with regards to vocalisation, articulation and expression. It will be tested before and after the project assigned period.

Date Collection Format	Administered by	Frequency	Date of administration
A 1.1 Social and Communication Developmental Questionnaire for Parents	All the parents of the study group	Once in June	Last week of June
A 1.2 Social and Communication Developmental Questionnaire for Teachers	Teachers who have worked with the children in the study group for at least three months prior to the study	Before the baseline study and After the baseline study	Second week of June and First week of Sept
A 1.3 Social and Communication Developmental Questionnaire for Facilitator	The facilitator of the study	Before the baseline study and After the baseline study	Second week of June and First week of Sept
A 2 Oral Motor Observational Chart	All the children of the study group	Before the baseline study and After the baseline study	Second week of June and Last week of Aug

ABT Assessment tools:

- **EPR- Based Assessment Tool (See Appendix B)** was used to assess the levels of Embodiment Projection Role of the study group and monitor any transitions during the project time.

Name of Test	Name of Children	Frequency	Date of administration
EPR – Based	Yogesh, Surabhi, Krishanendu, Chathurika, Sai, Fatima, Farhaaz and Akshay	Thrice – Last week of the three month study	Last week of June, last week of July and last week of Aug

- **Comparisons Drawings and Paintings: (See Appendix D)**

The comparisons of drawing and painting were used to assess the study group's exploration of self-expression. The sessions were conducted once every 7 sessions during the 35 sessions. The drawing and painting sessions were conducted individually, in pairs and as a group.

- **Video Tool: (See CD 1 video 3– 'Chalo Fatima')**

The Audio-Visual recording was used to assess the progression of one of the clients, Azraa Fatima. She is a non-verbal child diagnosed as Autistic and Epileptic, due to which she has developmental delays in speech. The AV tool was used to monitor her progression as most of her shifts were minute and significant, which could be best captured through the AV tool.

Name of Child	Focus Areas	Activities	Frequency
1. Azraa Fatima	Independence	Walking up and down the stairs	Twice each month – June, July and Aug
	Social Dynamics	Participation during group and partnering sessions	
	Speech and Vocalization	Singing in sessions/ Circle time and Play area	

3.4 Methods Used: (See Appendix E for SRS summary format)

The ABT sessions were planned in alignment to the study group's therapeutic goals. The action research phase of 35 contact sessions had a combination of various arts forms.

Group and partnering sessions were planned to address turn-taking, leading, following, initiation and motivation with social dynamics as the main focus to facilitate peer interaction and buddy systems. The group of eight eventually found their buddies and were randomly split into four pairs in the course of the study.

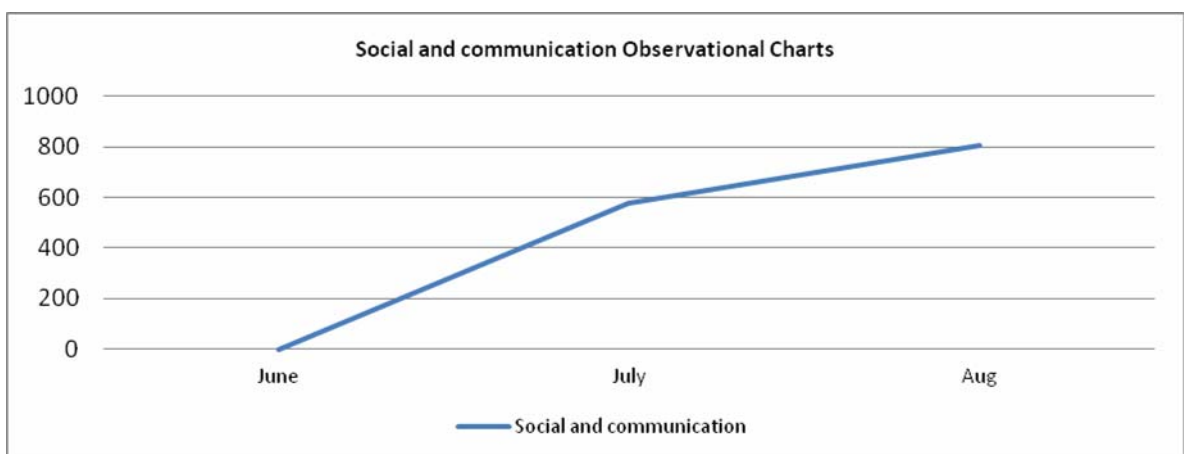
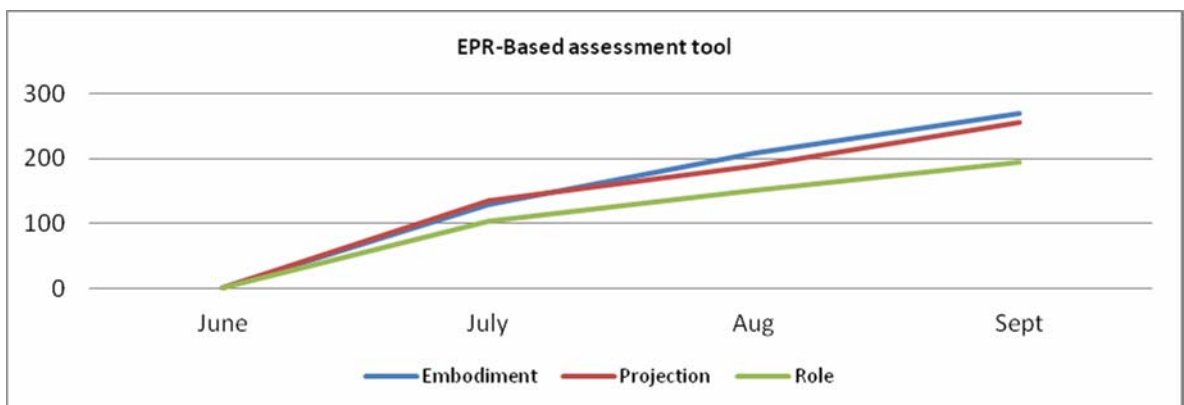
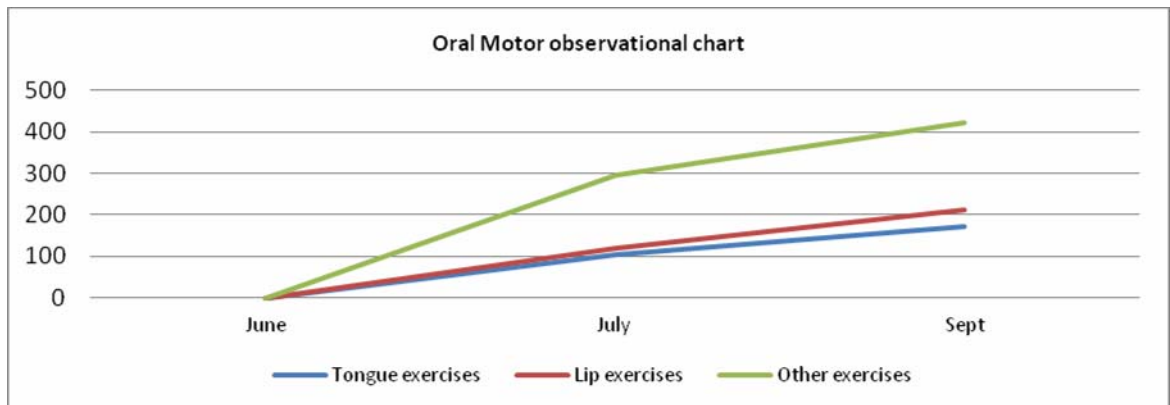
The artistic rituals, opening and closure were repeated through the sessions with some risks correlating to the artistic preparation to emphasize on the main therapeutic goals - Social Dynamics domain and Speech/ vocalisation domain. The artistic creation accentuated the use of the various arts forms. Some of the sessions had to be repeated before introducing some risks along the planned sessions which saw small successes among the group and the other reason was to maintain the balance of activities and energies of the study group.

EPR-based sessions were spread through the 35 contact sessions which helped in the overall assessment formats. The sessions also saw positive shifts in motor domain, mainly gross motor and fine motor, and cognition and memory.

The children enjoyed the embodiment of songs and dress-up/ role play sessions. Play with colours in Visual art sessions, drumming sessions, outdoor structured play and sessions at the nearby park were also favoured by the children.

4.1 Results Summary:

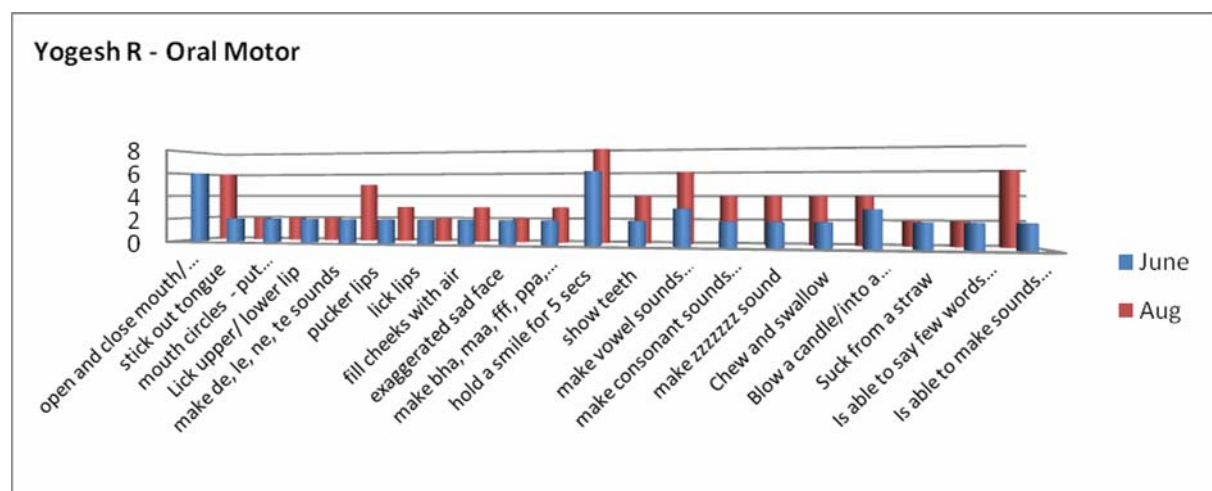
- The consolidated graph in the evaluation tests represents the progress made by the group from June to September. The sessions were conducted, assessments were administered, progress was tracked and graphs were plotted with June being the baseline.
- There is a visible upward trend visible in the oral-motor domain and in the social dynamics domain.
- Initially when the arts based forms were introduced the progress seemed quite visible. Continual usage of these forms in alignment with the therapeutic goals should help maintain the upward trend.



4.2 Results Detailed:

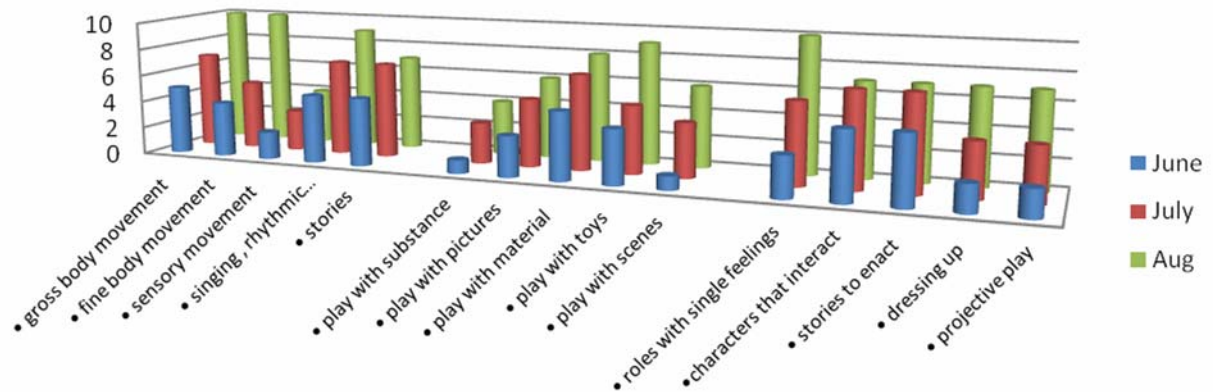
4.2.1 Yogesh R

There has been a marked improvement with Yogesh's vocalisation and sound producing qualities. He has started making the vowel sounds and some of the consonant sounds. Although he could not do most of the oral motor exercises due to organic causes (Microcephaly), Yogesh still tries to produce some of the syllables in his native tongue when he tries to communicate and has started producing animal sounds when the animal visuals are showed in flash cards. He does make attempts to express himself and sometimes tries to vocalize till he is understood. Yogesh has also got comfortable to eat a snack in school; he can only swallow finely smashed rice. He has become more expressive and playful with his peers and continues to foster his younger peers into activities.



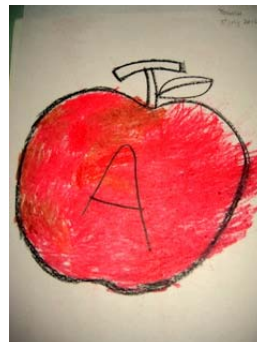
Yogesh enjoyed the Embodiment and Projection activities through song and dance. His energies poured onto his peers, he often got them into the activities and showed a lot of enthusiasm. He did start playing with toys, puppets and other material and pushed himself to express different emotions through his body and gestures even if he could not move his facial expressions too much. He did engage in the dress-up activities and took on roles of his favourite super star. He still has sensory issues when it comes to sound and textures. Yogesh resisted drumming sessions; he participated in the opening and closing but preferred to sit outside during the creation.

Yogesh R - ABT tool - EPR

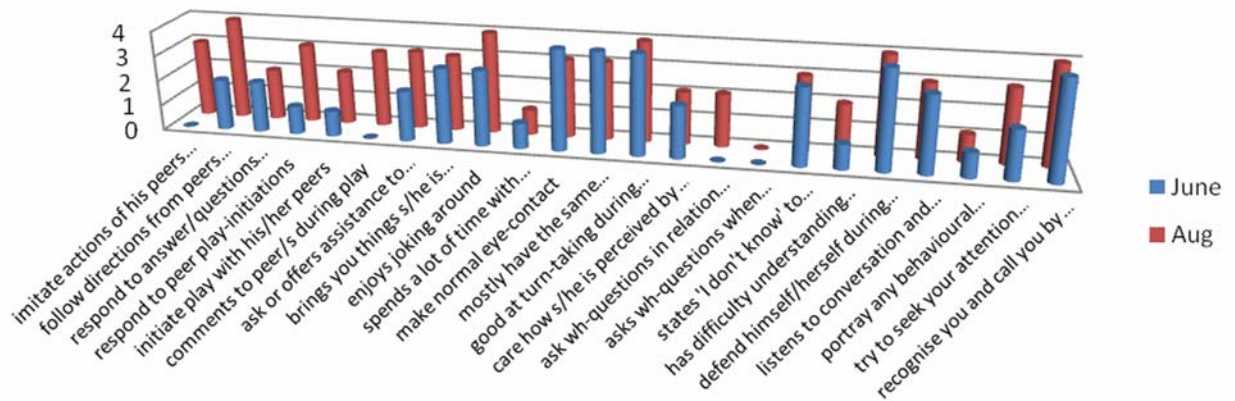


Comparisons of Drawing and Paintings

He has started painting as opposed to completely resisting the medium. He also prefers to paint one-on-one or with a partner rather than in a group. His fine motor skills have improved which can be seen in his crayon drawings.



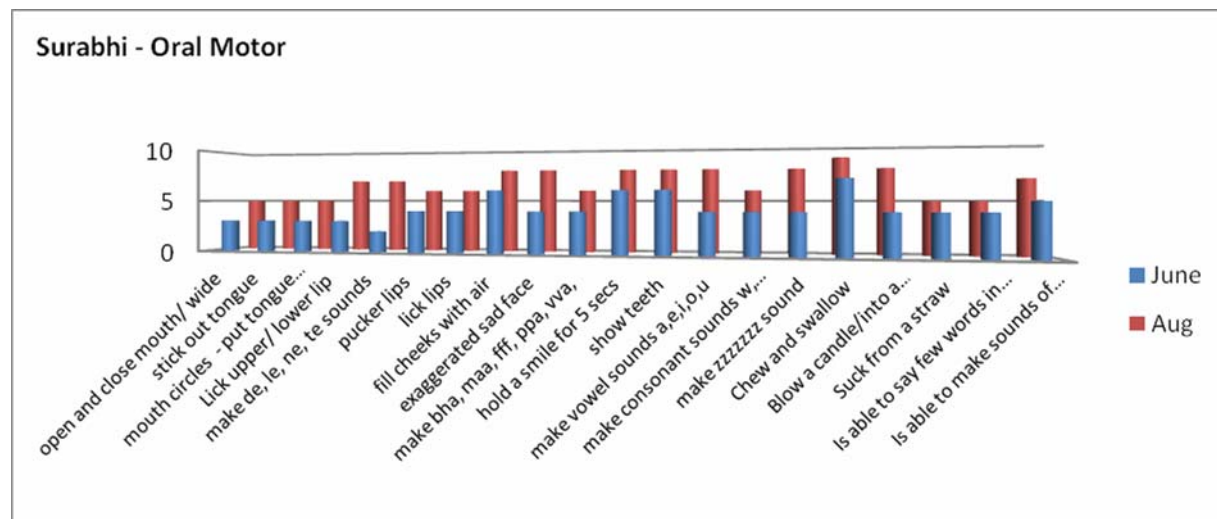
Social and Communication Development OB



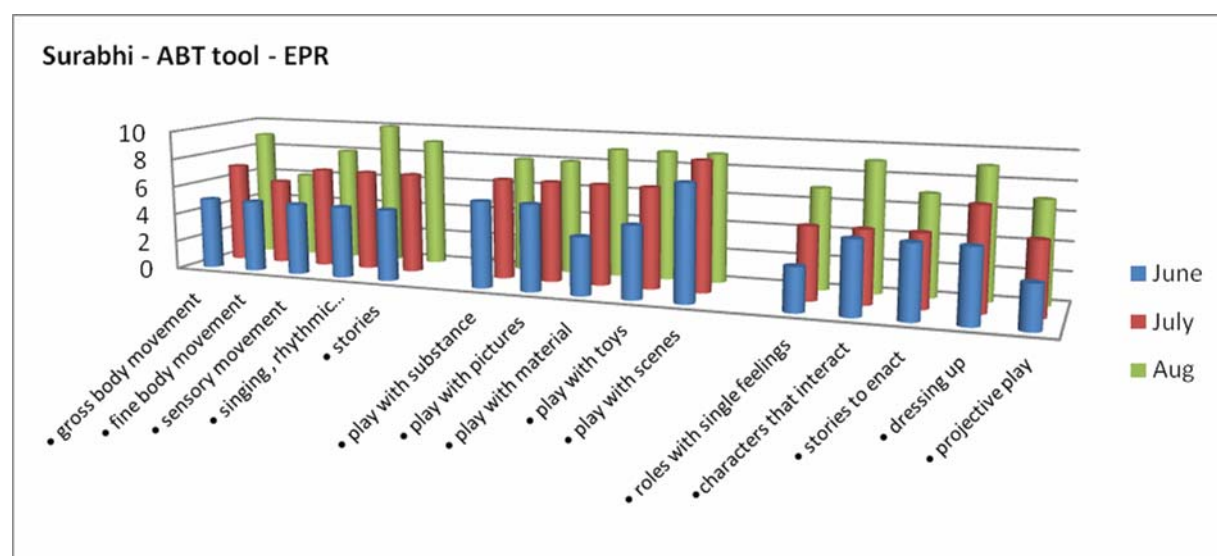
Yogesh's imitation skills and peers interaction has showed a marked improvement. Yogesh took on the role to buddy his peers through the study period. He also brought in the younger and non-verbal children into the activities. With his contagious energy and high enthusiasm, Yogesh did become a favourite among the group.

4.2.2 Surabhi V

The progress in Surabhi's the speech domain is visible She has started vocalising more than before and tries the say the entire word rather than the first syllable. She also tries to make sentences, both in her native tongue and English. She is more confident in vocalising the vowel and consonant sounds. She tries to make meaningful conversations with her peers and facilitators. This has also helped her express herself more freely and comfortably.



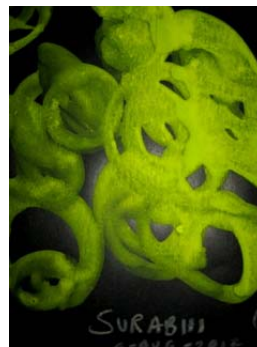
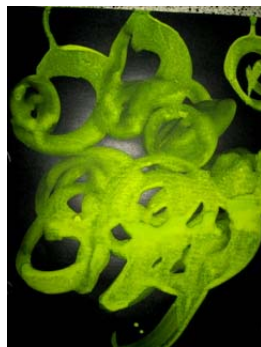
Surabhi has shown a steady improvement in the EPR- based sessions, she enjoyed the EPR-based activities the most, especially Projection and Role-play. She has also shown an improvement with her gross motor and fine motor skills, cognition and memory through these sessions. She enjoyed singing and embodiment of songs, she often requested for these sessions repeatedly. Surabhi enjoyed the drumming sessions especially songs and rhythm, she followed pulse, rumble and stop-cut. She often requested for drums during play-time and would sing to herself or her peers. Puppets, dolls and role-play have helped her with vocalisations, peer interactions and self-expression. She even enacted as the facilitator during role-play, got into costume and conducted a session with her peers.



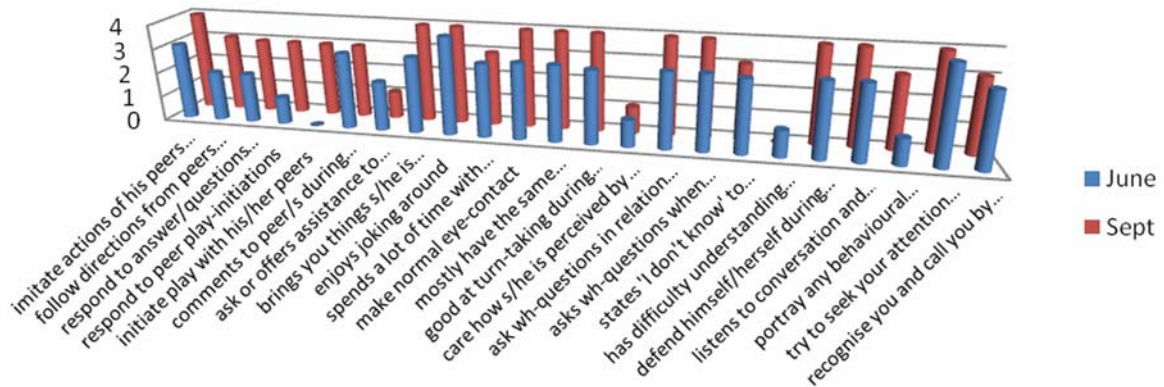
Comparisons of Drawing and Paintings

She was a lot more independent during the sessions and did not require prompts. She most often, led the group as she picked up commands and instructions faster than her peers. There are shifts with her fine motor skills, her pincer grip and pressure has improved.

She does like to choose her own colours and paint without hesitation but she does seek constant attention and approval from the facilitator during group sessions. She liked cleaning up the space after painting sessions and always took the lead in both setting-up the class and to mop the paint stained areas on the walls and the floors. She even got her peers involved in the process.



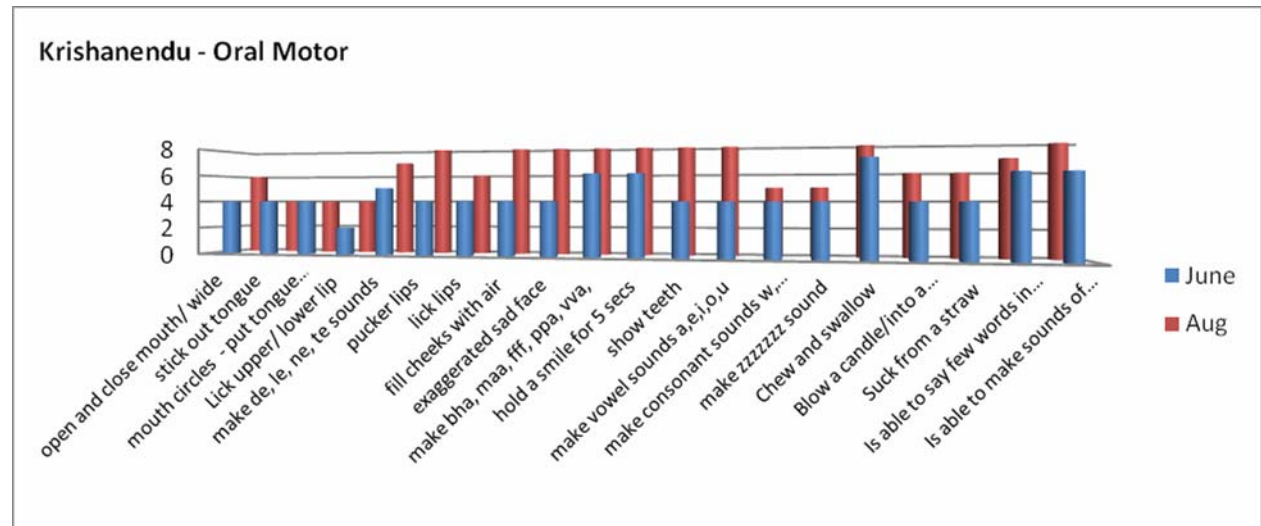
Surabhi - Social and Communication OB



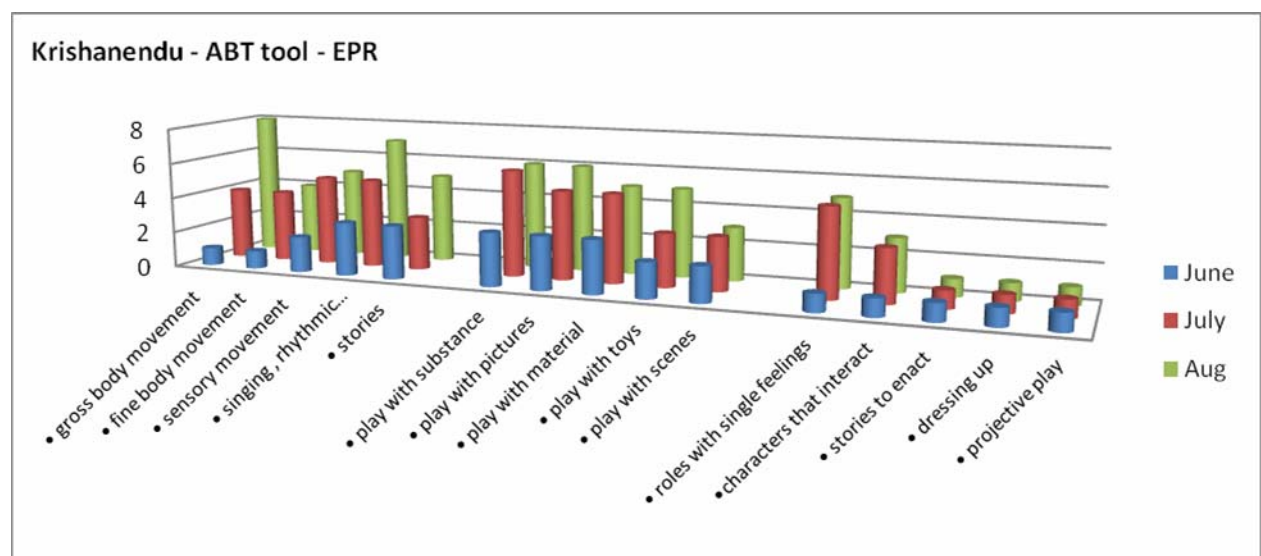
Surabhi did get very comfortable with her peers and the facilitator. She has become more playful and has started interacting with her peers, initially she had to be facilitated, and she now interacts with least amount of intervention. She buddies her peers during sessions and constantly tries to get them into the activities. She has become more expressive and asks a lot more 'wh' questions. Surabhi interacts with her peers a lot more in the session space and with the study group than the other peers in the center. Surabhi still seeks approval constantly and sometimes when she does not get it her way, portrays behavioural issues by pinching or saying bad words.

4.2.3 Krishanendu Chatterjee

Krishanendu has shown a remarked improvement with vocalisation of vowels and consonants, singing songs and speech. He has started answering to questions addressed to him in monosyllables both in his native tongue and English. He has shown marked improvement with the oral motor parameters which has got him to become comfortable to use his voice more freely, but he requires constant prompting.

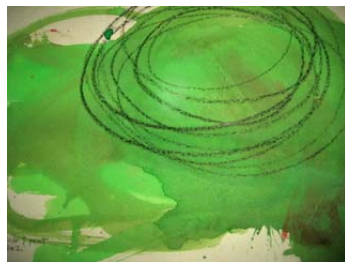


Krishanendu has showed a marked improvement in gross motor movements, he is more agile and participated in embodying songs during sessions. His participation in group sessions has improved where he led singing sessions. Krishanendu liked the drumming sessions and responded well to one-step instructions with constant prompts. He showed more responses in the Embodiment and Projection parameters than Role. He liked playing with objects and different material (sand and water), responded to visual pictures and scenes through answering one-step questions (expressions-smile face, sad face, surprise face, crying face) But he did not respond much to role-play, although he did not resist dress-up and pretend play, he was a mute participant.

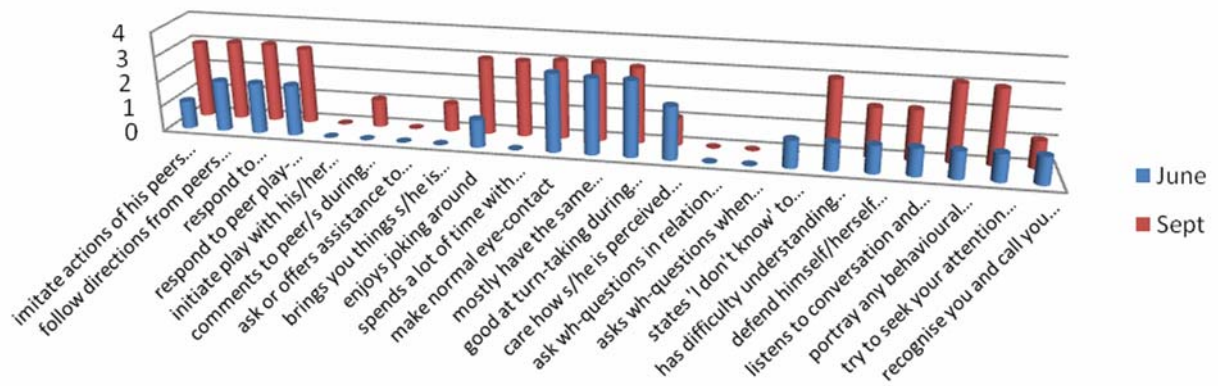


Comparison of Drawings and Paintings

He likes mixing colours and has started painting on the given medium (paper) after repeated sessions, previously he used to paint himself or put objects into his mouth. He likes painting on large sheets and on walls. His fine motor movements with pincer pressure have improved; it is very evident in his crayon drawings.



Krishanendu - Social and Communication OB

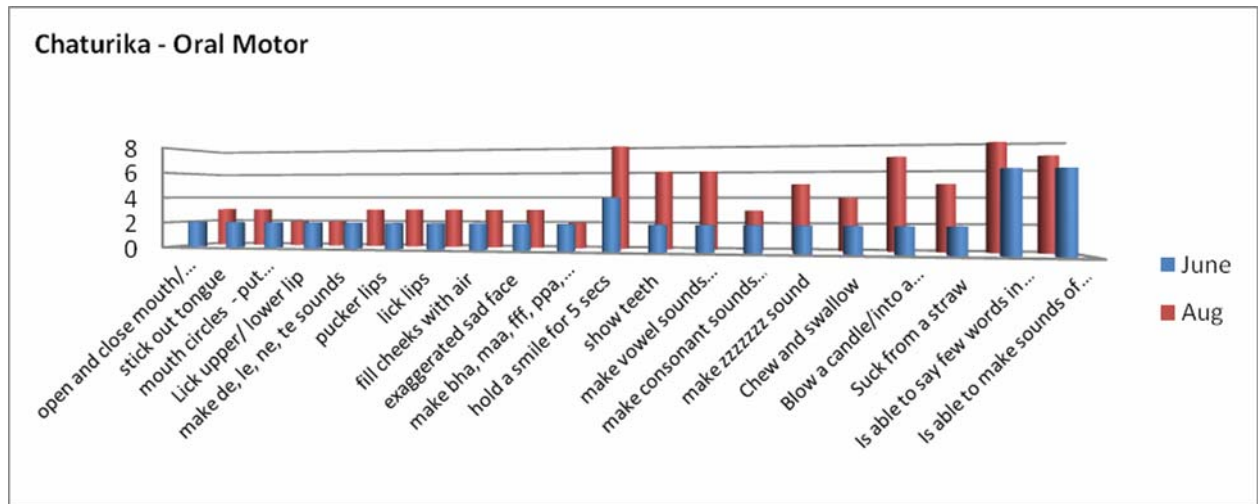


Krishanendu has picked up a lot from imitating his peers in class; he responds to his peers and follows them during the sessions. He has to be facilitated or initiated into activities and most often responds to a peer buddying him through these activities. Krishanendu responds to Surabhi leading him through the sessions. Although she speaks in Kannada and he in responds in Bengali or through non-verbal gestures they seem to have found a sweet bond that plays itself beautifully during the sessions.

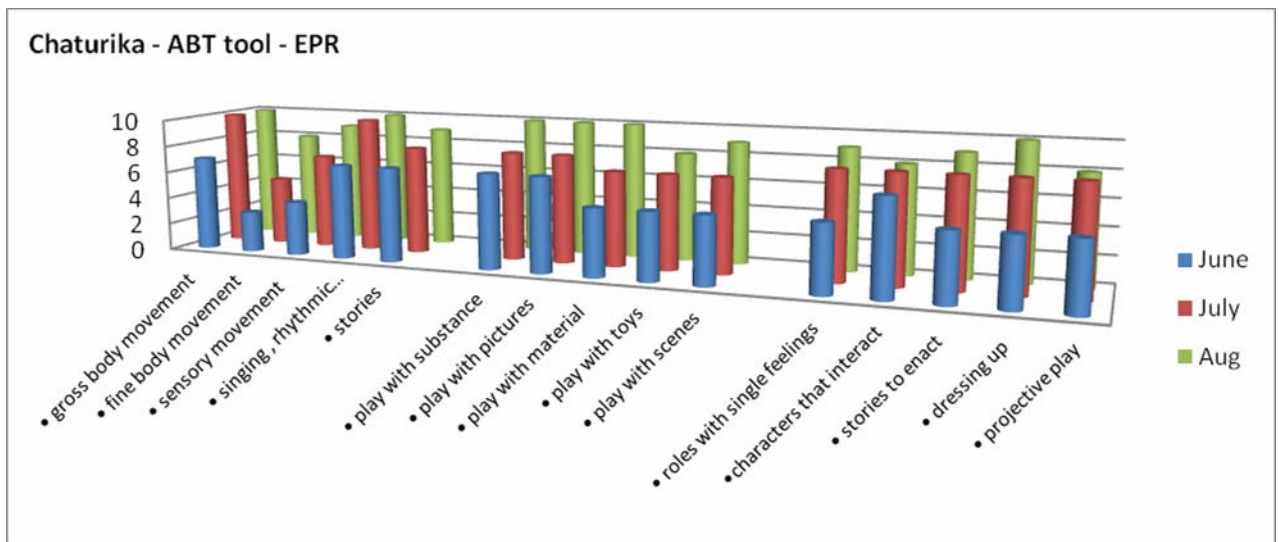
He resists activities when he is not in a mood and sometimes pinches and screams, this has reduced during the study period. Through continued peer buddy interactions, his participation and social interaction should improve.

4.2.4 Chathurika Yuvraja

Chathurika's speech and vocalisations have steadily improved; she is more comfortable making the vowel and consonant sounds, she still struggles with some of the sounds like fff and bha because there is an organic problem with her mouth structure. She has started producing few other sounds like zzz and can blow a candle, air into an instrument with more pressure and suck from a straw. She has started chewing her food much better than before. She tries to vocalise more words and speaks in sentences in her native tongue Kannada and English.

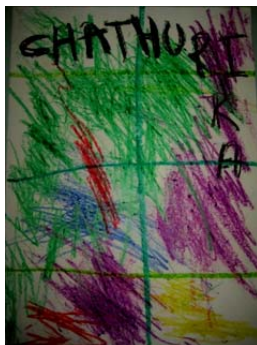


Chathurika has shown a marked improvement through the EPR- based sessions. There have been improvement in her gross and fine motor movements, she involves herself more with playing with different sensory material and enjoys singing and dancing. Chathurika enjoyed the drumming sessions and followed one-step instructions. Chathurika's cognition and memory has also improved as she recalls incidents, retells stories and enacts the characters. She liked changing her voice and speaking for the puppets. She was very imaginative in building stories as well, like giving name to the class puppet, 'parrot frog'. She asked questions about the characters in the stories during storytelling and also made associations with them. She has started pretend play and sings to herself during play.

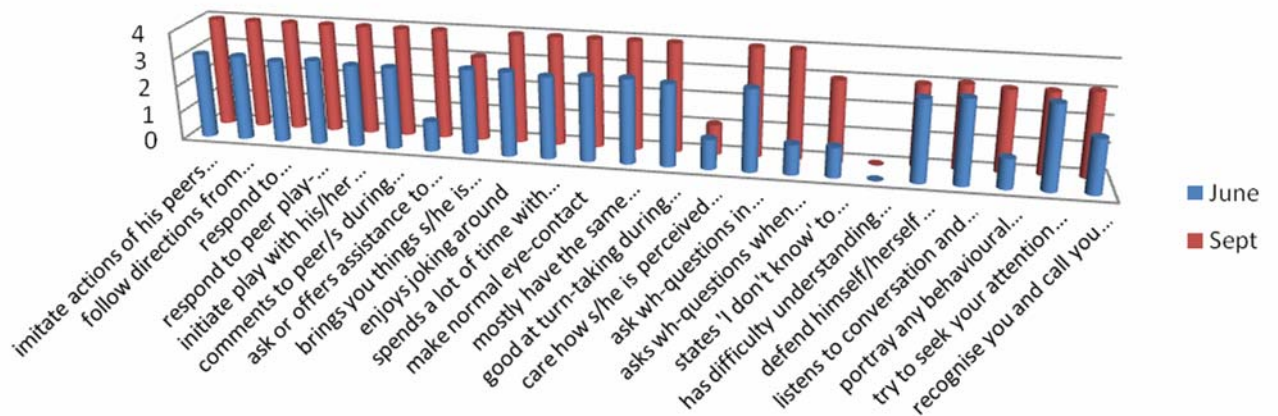


Comparison of Drawings and Paintings

There was a clear shift in use of colour when she was given a choice from crayons to paint. She participated with a lot of enthusiasm during individual, partner and group sessions. And she likes painting with her hands; she enjoys working with maida paste and mixing colours. She also gets herself to literally swim in the painting and plays with the medium.



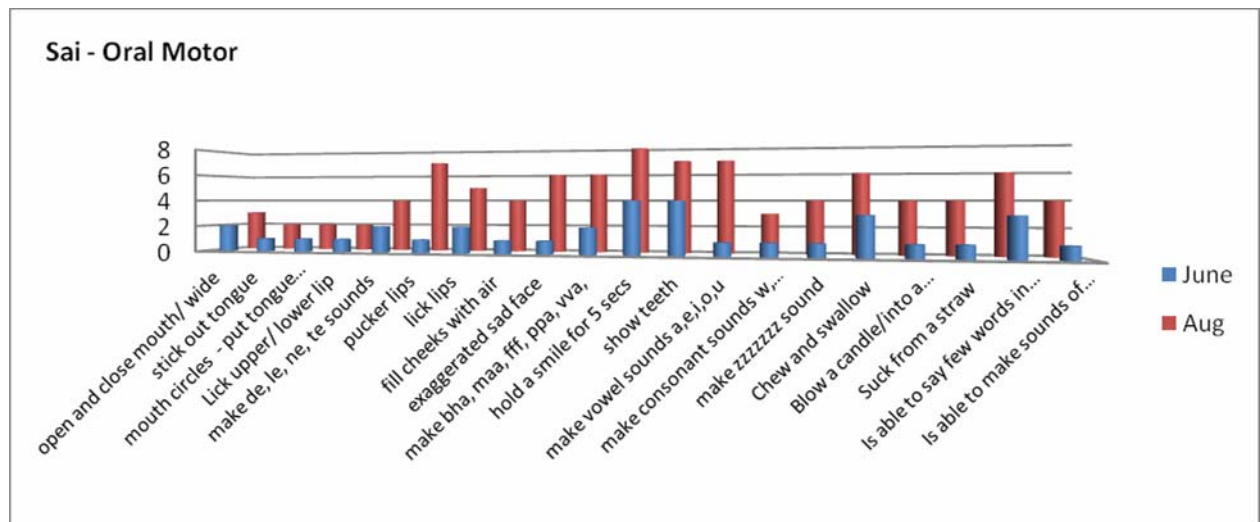
Chaturika - Social and Communication OB



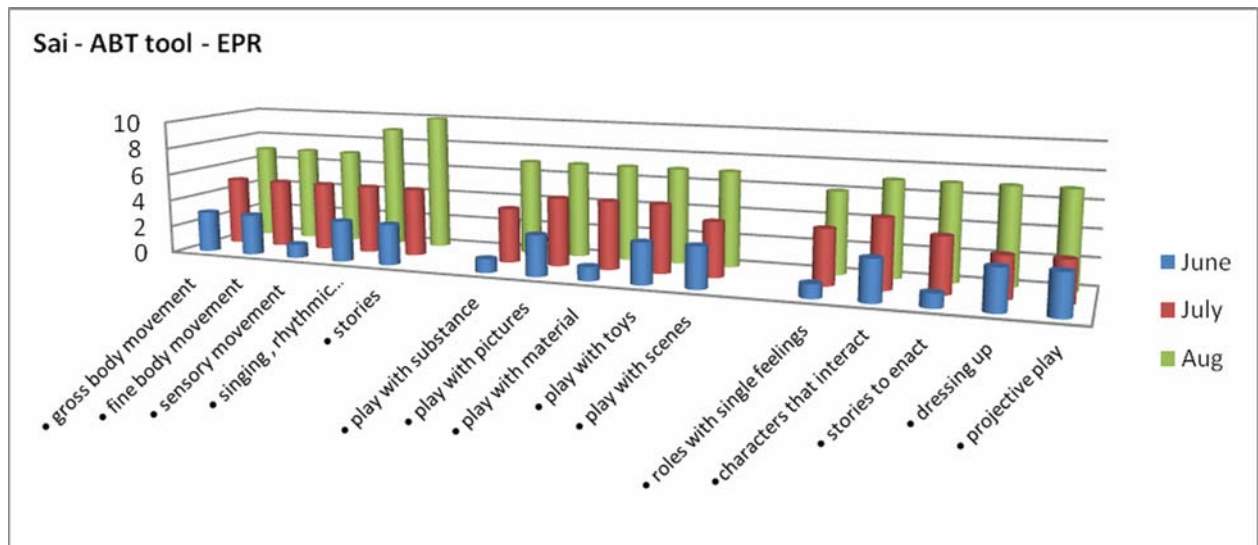
Chaturika's interactions with her peers have improved during play and other social situations. She initiates conversations and does not require much prompting. She is more confident with her speech and vocalises a lot more with her peers. She buddies her sister and other children during activities and participates with a lot of enthusiasm during individual, partner and group sessions. She does seek approval from her facilitators but the frequency has reduced over the study period.

4.2.5 Sai Yuvraja

Sai has shown a marked improvement on almost all the assessment scales. Her participation in sessions has gradually improved over the study period. She vocalizes a lot more; she produces the sounds of vowels and some of the consonants. She finds it difficult to produce most of the consonant sounds (mm, la, n, pa, rr) as there is an organic problem with her mouth structure. And she has lost most of her front tooth through injuries. But she still makes an attempt during oral motor exercises like the bike and bee sounds (blowing air between lips, zzz) which she likes the most. Her speech is much clearer and she tries to speak in sentences both in her native tongue, Kannada, and English. This has pushed her to sing during sessions, although she embodies the song a lot more than she verbalizes, with constant prompts she sings both in group and individual sessions.



Sai enjoyed all the EPR- based activities and participated with a lot of enthusiasm. She particularly showed a lot of improvement with embodiment of songs and enacting characters from stories. She liked listening to stories and asked questions about characters. She liked playing with puppets and giving voice to them. There has been an improvement in her cognition and memory as well. Sai has shown improvement in her gross motor and fine motor skills, play with sensory material (sand, water and beads) and structured play. Her bi-partial movement has also improved this is evident when she pushes herself forward with her legs and hands sited on a tyre during structured play. She has become more expressive in saying what she feels most often, she laughs more and smiles a lot when she is happy.

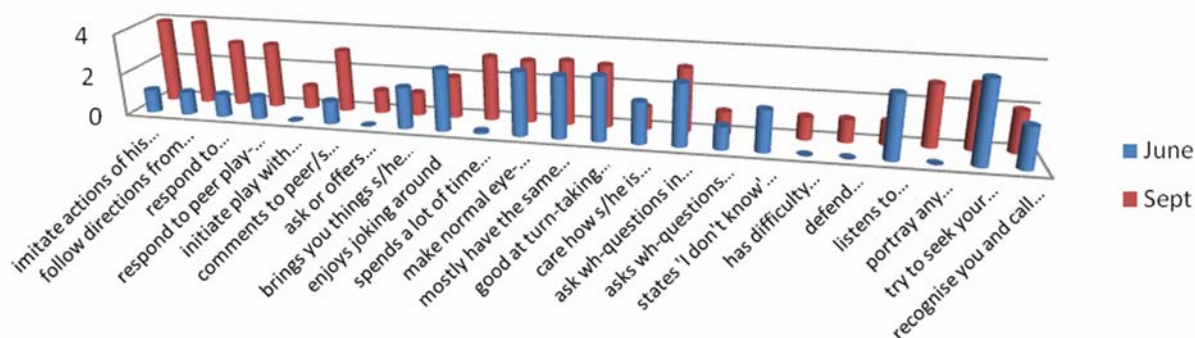


Comparisons of Drawings and Paintings

Sai has become more expressive and developed a liking for painting and use of crayons; previously she used to opt to draw only with pencils. Her pincer grip and pressure have improved. And she likes painting with her hands; she enjoys working with maida paste and mixing colours. She prefers painting in partners and in groups.



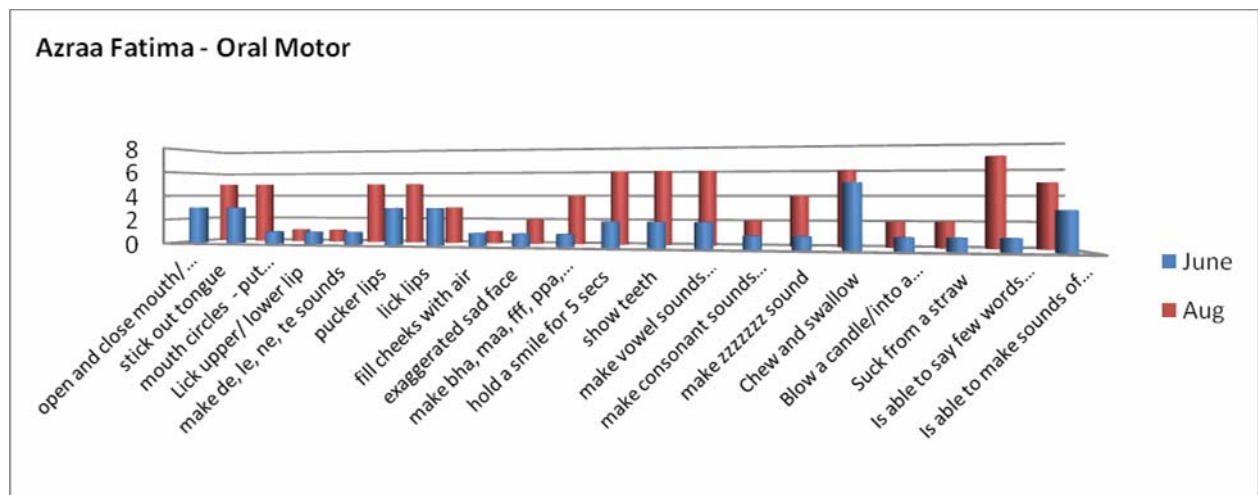
Sai - Social and Communication OB



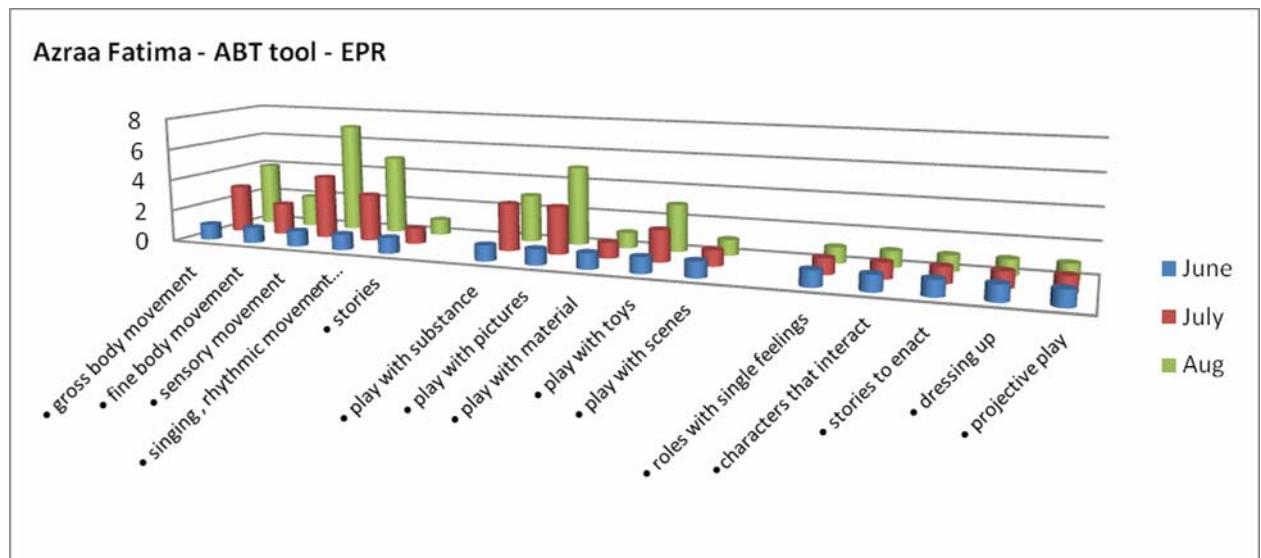
Sai has shown a marked improvement with her social interaction with her peers. She initiates play and tries to make conversations with her peers without any prompts. She responds to comments made by peers and is a lot more expressive about her feelings. She asks many questions about her peers and enquires about them constantly, especially when someone is absent or doing something else other than the activity. She has started defending herself in social situations, when Akshay jumps on her back or Farhaaz pinches her she says - 'Akshay no jumping' or 'Farhaaz, no pinching'. She has reduced crying and seeking attention constant attention from the facilitator.

4.2.6 Azraa Fatima

Fatima has shown improvement in her vocalisations and has started producing more sounds. She has started singing songs in different languages other than her native tongue. She has more of a rote memory and most often doesn't make associations with her vocalisations, but she has shown associations in certain aspects like responding to one-step instructions 'uuper jaana hai' or 'Ghaane gha yenge', when certain songs are sung she can make associations to the songs and complete the song. She enjoys singing and remembers all the lyrics; she often starts with 'gibberish' or babbles and catches on to the lyrics once she listens to them once. Through continued and repeated sessions, Fatima will pick up on more one-step instructions and associate to a lot more songs and words.

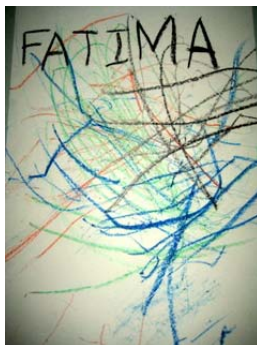


Fatima has shown improvement in Embodiment and Projection during the study period. She enjoyed drumming sessions and kept pulse to most songs. In the beginning Fatima did not touch the drums and preferred to clap in rhythm, she gradually started hitting the drum and now plays a rhythm she was introduced to in the beginning. She also uses the tambourine in the same beat. She listens to the beat change and pauses and follows patterns in beats. Fatima responds to instructions when it is said to her in a rhythm rather than just spoken. Similarly she responds to drawing with crayons when instructions are sung to her in rhythm '1,2,3,4' or 'swirl swirl twirl and swirl'. She resisted most of the dress-up and enactment sessions. She does have sensory issues when it comes to textures, she has started picking up material and substances like playing with water, sand, maida dough and maida paste. With repeated continued activities Fatima could show more shifts with her Embodiment and Projection and gradually into Role.

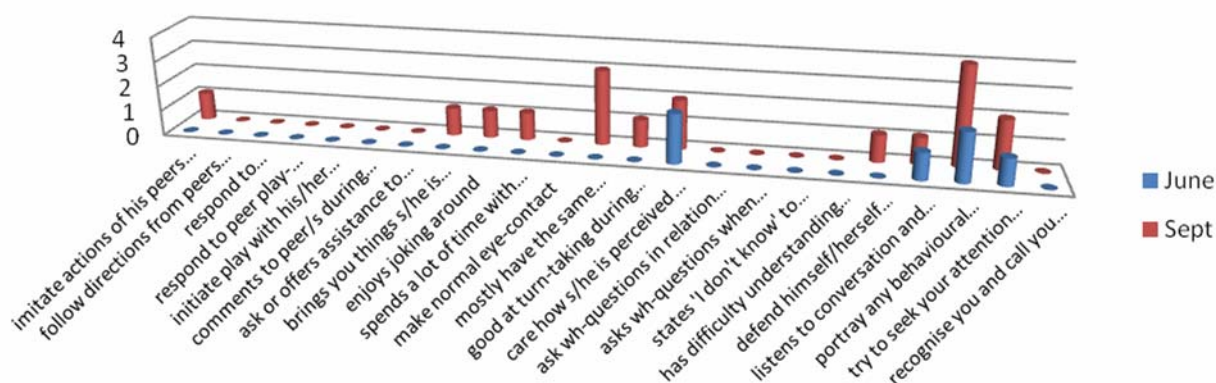


Comparisons of Drawings and Paintings

Fatima has started drawing with crayons and paintings with a brush. She responds better when she is sung to or when she is singing a rhythm. She has started putting her hands into maida paste and mix colours. She prefers individual sessions to partner and group sessions.



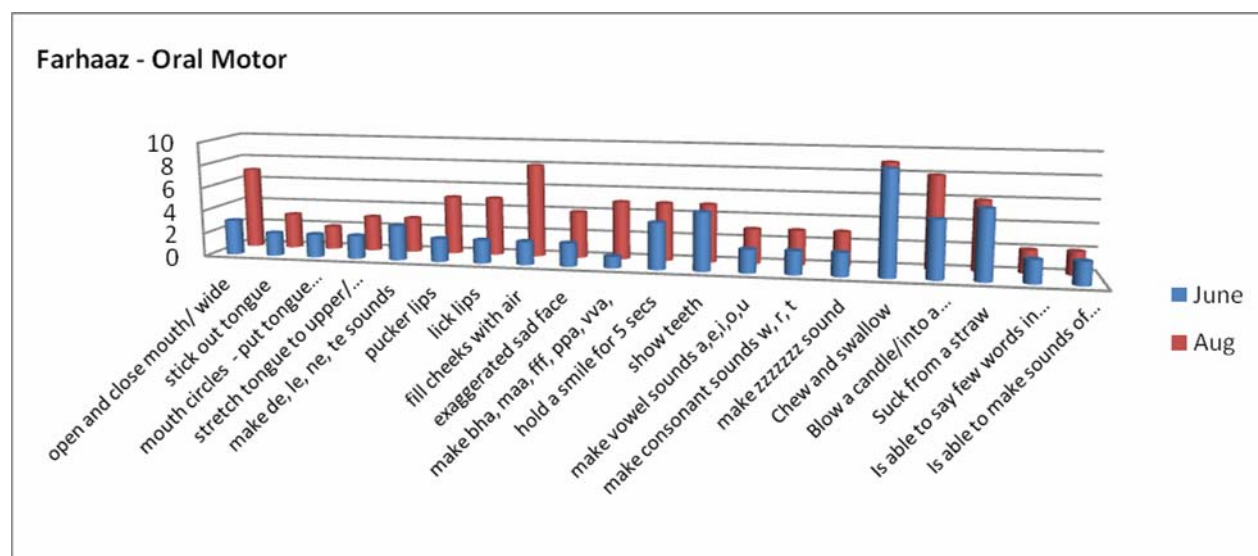
Azraa Fatima - Social and Communication OB



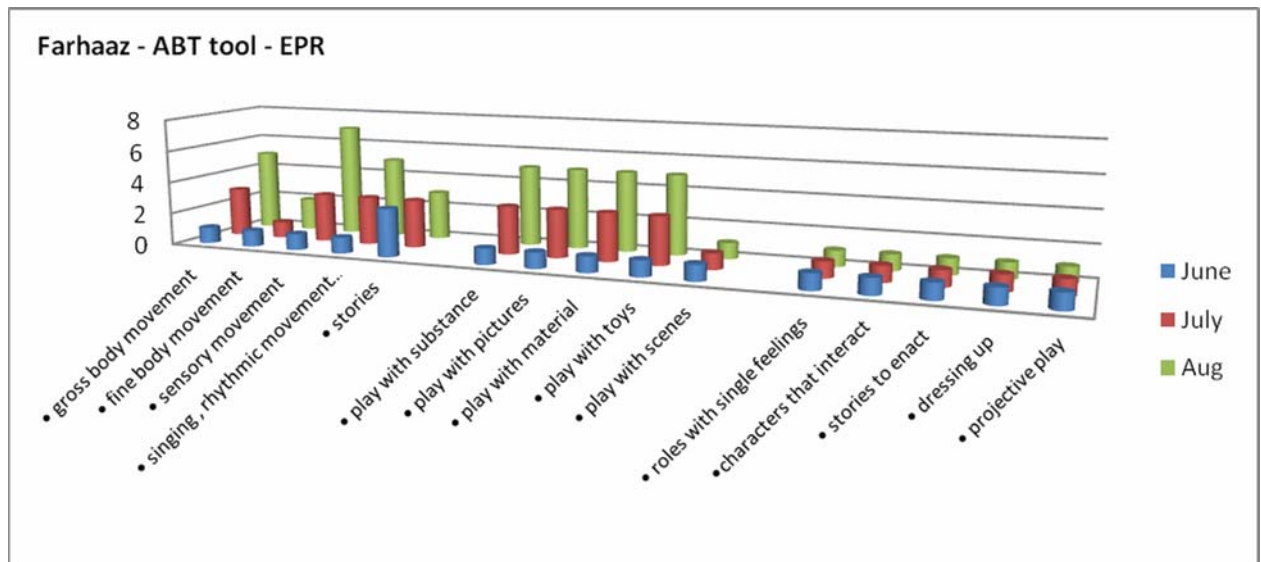
Fatima has not shown much progress in the aspects of social and peer interaction. She prefers to be on her own and sometimes seeks attention from her care-giver or facilitator when she is hungry or sleepy. She has started coming into opening ritual activities like circle-up, circle in/out and jump in/out. She joins the group during closure rituals when we vocalize a,e,i,o,u and say OM. She comes in and listens to singing and story sessions but does not particularly respond but listens as she repeats the songs post sessions, on her own. Fatima has started communicating more with her facilitator than her peers. She responds to sounds more than visuals. Even when she climbs up and down stairs, it started off as hand-held counting of steps but now she is independent with that action. She does portray some behavioural issues to seek attention, she hits her head against the floor or wall and sometimes bites and pinches. She does this mostly when she is hungry or sleepy. She calms down when she is hugged or when her favourite songs are sung to her. She requires more repetitive and rhythmic activities, as she follows a pattern with her movements. Most of her non-verbal gestures are also forms of communicating but since there is no point of reference, we are most often left to intuition and interpretation of the situation in her case. With repeated sessions with peers, Fatima could start responding to their voice and can be buddied with an older child.

4.4.7 Mohammed Farhaaz Khan

Farhaaz is non-verbal and has started vocalising the vowel sounds a,e,o and u. He imitates the facial stretch and has started producing the sounds. He has started producing the sounds of some of the consonants like kha, fff, pa, bha, mm and zzz. He does not verbalize during songs but has started adding sounds to his gestures like saying 'kha, kha' for crow or 'gha' or 'ooo' for roaring of the lion. He responded to all the oral motor exercises with constant prompts. He does scream when he is not given what he wants or when he is not understood. Farhaaz requires repetitive sessions to push him to vocalize more to express himself and his needs.

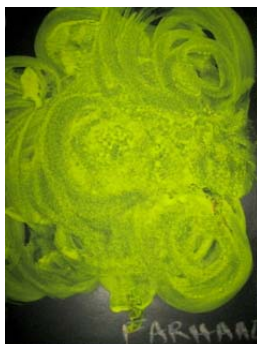
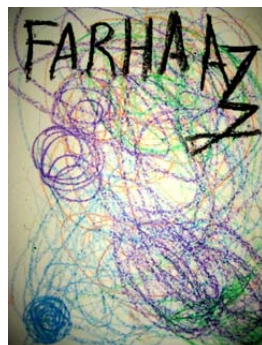


Farhaaz has shown progressive improvement with Embodiment and Projection in EPR-based sessions. He has shown a marked improvement in gross and fine motor movements as well in use of sensory material (sand, water, wet paint, maida and dough). He likes listening to stories and looking at pictures in books. He recognizes characters and nods his heads/ points when asked questions about the pictures. He has started playing the drums; he explores the whole instrument and tries to make sounds in different parts of the drum. He prefers to hit the drum and create his own beat, which most often the entire group tries to follow. He smiles when we follow his beats and let him play. He still has some sensory issues, he does tend to put material into his mouth, and the frequency has reduced during the study period. He has started sitting in the circle during opening and closure ritual. He participates in the artistic creation on his own/without prompts if he is interested or he has to be constantly brought into the group.

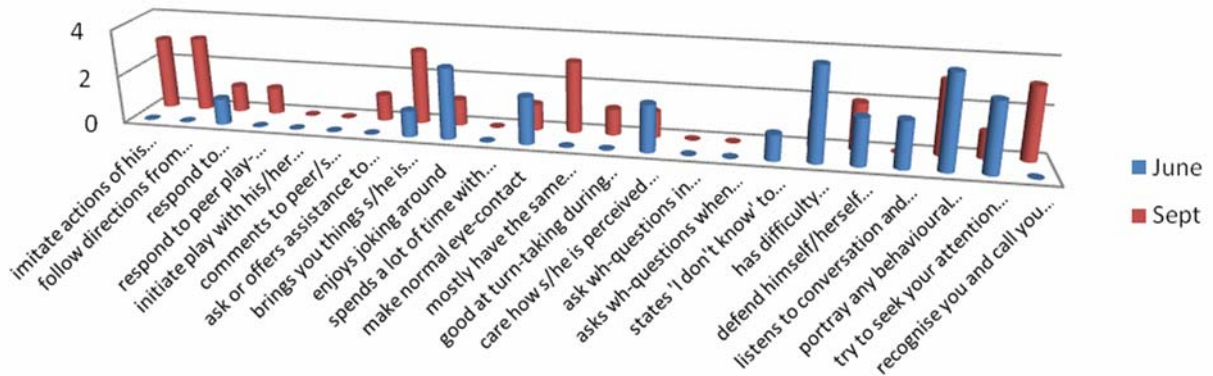


Comparisons of Drawings and Paintings

Farhaaz has started painting and scribbling with crayons. His sitting tolerance has improved during painting sessions. He has started exploring with various media like wet paint, maida paste and mixing colours. He has stopped putting crayons and other material into his mouth. He prefers one-on-one drawing and painting sessions. He has started participating painting with a partner and in group painting activities.



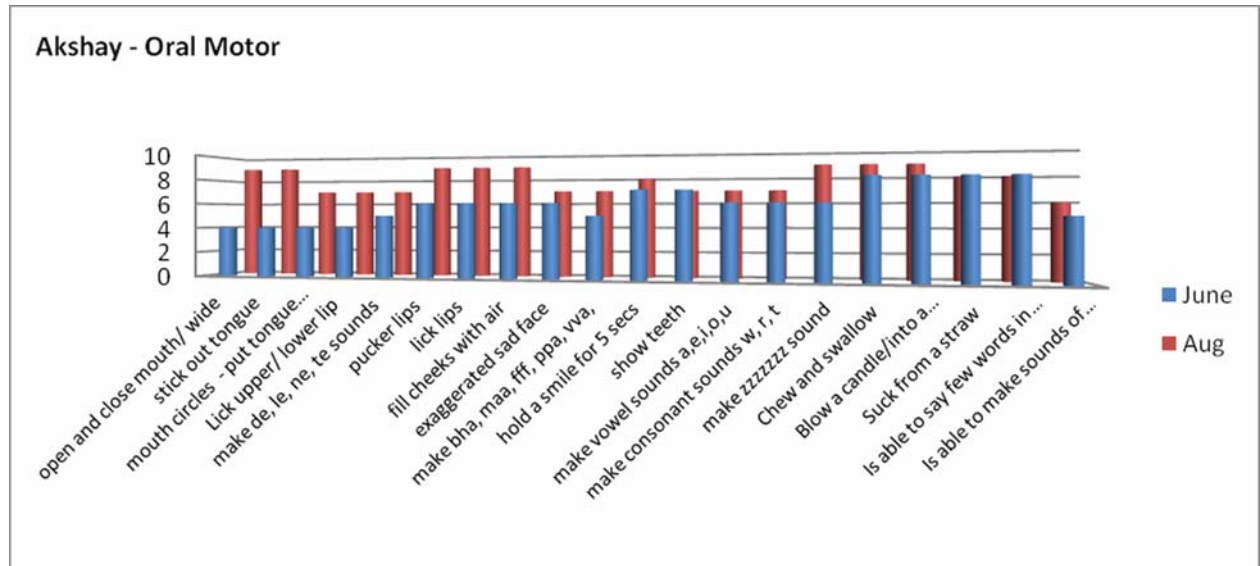
Farhaaz - Social and Communication OB



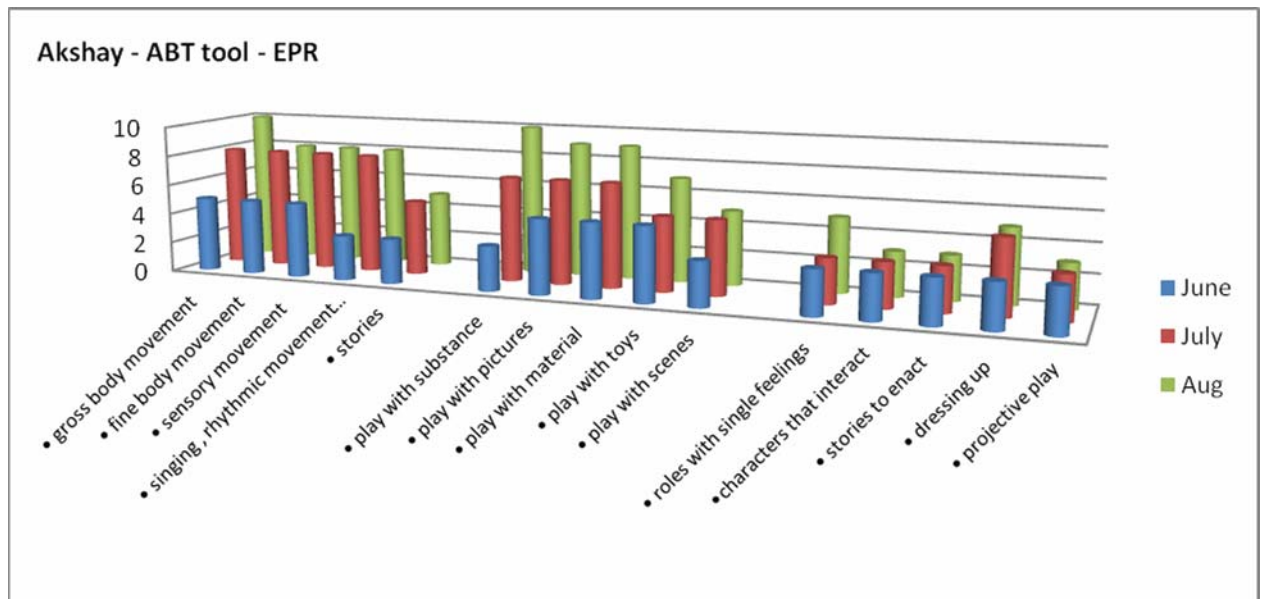
Farhaaz has shown some improvement in interacting with his peers. He attempts to interact with his peers by hugging or looking at them very closely. He responds by nodding and other hand gestures when a peer asks him questions or tries to interact with him. Farhaaz pinches or screams when he is not understood. His turn-taking, leading and following has improved during group sessions. He responds to partnering sessions, but responds better during one-on-one sessions. Most of her non-verbal gestures are also forms of communicating but since there is no point of reference, we are most often left to intuition and interpretation of the situation in his case. With repeated sessions with peers, Farhaaz could start responding to their voice and can be buddied with other children.

4.2.8 Akshay Vinod Kumar

Akshay has showed improvement with his vocalisation of vowels and consonants. Akshay can verbal but chooses to verbalize when required or when he wants to, usually when he requires something. He has started using more words in English and has started using sentences, 'I want..'. He has also started singing songs in large and smaller groups. He still finds it hard to express himself in social situations and does not how to communicate his requirements, he sometimes screams or cries till he is understood.

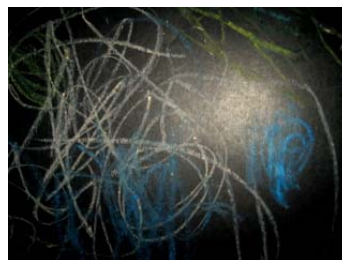


Akshay has shown improvement with Embodiment and Projection in the EPR- based activities. He enjoys playing with sensory material (sand, water, wet paint, maida paste, dough) and other objects (toys, pegs, picture cards, books). His participation with large and small gross motor movements has improved; he likes structured play with more challenging material like twisting ropes and unknotting them and play with tyres (stacking them). He likes drumming sessions and follows 1,2,3,4 beat, tries to keep pulse, rumble and stop-cut. He has become more expressive and smiles a lot more when he is interacting/playing with his peers and facilitators. He also requests for songs and prompts the facilitator during opening and closure rituals.

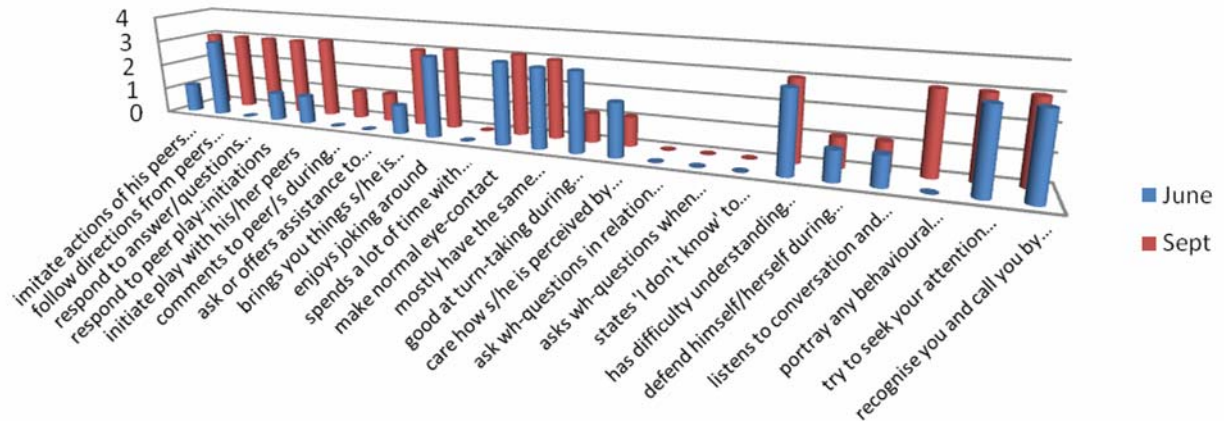


Comparisons of Drawing and Paintings

Akshay likes drawing and painting. His participation has improved during partnering and group sessions. He has started exploring wet paint, maida paste and mixing colours which he prefers to do directly with his hands. He often likes to paint himself and smiles when his face and hair turns another colour.



Akshay - Social and Communication OB



Akshay has shown a marked improvement with his peer interaction. He initiates and responds to his peers, often plays around with them during sessions. He likes chasing and tickling his peers, often laughs and plays around with them. This has been noticed after the sessions started. His turn-taking, leading, following and initiation during activities has improved. He has become more independent during activities. His enthusiasm is higher when he is in his peer group (study-group), he responds better in partner sessions and likes being amongst other children. He did have a peer-buddy (Yogesh) in class who led him through the sessions, sometimes he responded better to him than to the facilitator.

5.1 Limitations:

Given the heterogeneity of the group, the clear limitation was the contact time the children who comprised study group had with each other. Although the frequency of the sessions was maintained, a longer period of the group staying together would have helped better in facilitating the peer interaction. The time required to expose them to various arts forms and allow them to get in touch with their inherent rhythm was inadequate.

Since the research looked at monitoring social awareness and peer interaction, the study group required more time and contact sessions. Considering the group had both verbal and non-verbal children the intricacies of communication and coping mechanisms could not be wholly or realistically monitored/ observed. The group was just getting warmed-up and the research saw merely the surface of the responses. It was ambitious to expect peer-buddy systems to arise within three months, but the research has tracked some emerging patterns between peers. More time and continued sessions will allow the success of the research.

Some children missed out on fun EPR-based sessions because of absenteeism due to various health and unexpected family emergencies. As a result they missed out on the continuity and sync of the planned sessions and assessments.

The organic condition of the children in the study group saw some level of regression in their development. Two out of eight children had severe epileptic attacks during the study period and had to be hospitalised. One of whom was put on high dosage of AED medication which caused certain slowness and 'freezes' in her reactions whereas the other not just missed sessions but was also introduced to AEDs (Anti-Epileptic Drugs) which did cause some slowness and irritation. Whether AEDs caused these repercussions are still under speculation.

5.2 Learnings:

'The most important thing in communication is to hear what isn't being said' – Peter F. Drucker

The findings of the study conducted explored social awareness and peer interaction among children with developmental delays/ special needs to create internal peer buddy systems. The study looked at fostering a safe environment for children to find ways to communicate and bond with least amount of intervention.

The study was to encourage peer learning through the development of peer interaction to provide alternative learning spaces for children with special needs other than a therapy set-up or with their parents and care-givers. Most parents with special needs children go by the notion that their children require constant monitoring by care-givers/ parents and focussed learning without allowing them to explore media on their own in other spaces. As most of the teachers, administrators and parents lack experience or knowledge of successful programs, we most often tend to underestimate the benefit to the children involved. This is not discounting the fact that these children require to be monitored; in most cases it is genuine as it is related to the survival and coping mechanisms of a child in absence of them.

The study group had a good mix of heterogeneous children with special needs both verbal and non-verbal; children with organic speech disorder conditions were more receptive to being social which encouraged the children in the spectrum to participate. Most often the children in the spectrum were brought into the activities by their counterparts with some facilitation and initiation by the facilitator.

The children with developmental delays embodied the songs and moved around as much as they could while their ASD buddies sang after being prompted to do so. In most cases, it happened organically as one led the other into the activity. Arts Based Therapy allows fluidity and flexibility which gave a certain sense of freedom within its structure. The artistic rituals, opening and closure, and the artistic creation allowed the children and facilitator to take small risks and play with the various arts forms. Since the structure allowed rituals and risks the group explored small successes within that given spaces.

The study looked at 'Play' as the basis for a child's emotional, cognitive and social development. The flexibility of ABT allowed children to freely explore drumming, dance, movement, music and painting, as their therapeutic goals lead the basis of these activities it has helped in the overall development of the child's socio-cognitive development. The EPR-based assessment tool served as a broad platform to explore the dramatic development of the study group. There were positive shifts noted in study group's social responses, physical confidence and imagination. The children with Mental Retardation and developmental delays initiated play even outside the session space. This is in alignment with the literature review.

The use of music through songs and drums has improved the vocalization and speech development of the study group. There were marked improvement in their turn-taking, imitation and vocalization of sounds. It has shown positive shifts in the study groups' speech development and communication skills, especially with autistic children. I have to reiterate Boxill's findings of using music therapy with non-verbal children 'singing to, for,

and with the client is a means of contact and communication that stimulates the awareness of self and others. To sing or hum a melody is to use the musical instrument that is an extension of the self – the human voice...’ This was experienced at almost every stage of the research period. There were not just positive shifts noted with their speech development but also with their self-expression which was captured through the use of colours in their drawings and paintings and vocalization through songs.

I feel the non verbal children seem to have their own coping mechanisms and communicate through non-verbal gestures. We do not have specific points of reference, so we are left to interpret them through intuition and individual connections/ bonds that are created within the learning spaces. Children have a lovely way of creating these unsaid/unspoken bonds and we need more learning spaces that provide this freedom for them to build bonds and feel accepted.

The study also noted positive shift in other domains like cognition and memory, gross motor and fine motor development and in many ways calmed them on a more intuitive and subliminal level.

With most of the educational systems whether in therapy or inclusive set-up, the structure is very rigid. Teachers and facilitators are not allowed to experiment beyond a point as it is too boxed within do’s and don’ts. It does not allow one to explore the emotional parameters. Whereas ABT is more organic in form for learning that allows the facilitator and children to intuitively fill these flexible structures with the processes of various art forms as it unfolds. Thus, making learning personal, hands on, organic and playful.

Personally, the research period has been a journey that has challenged my understanding of process-driven work and use of the arts as a learning tool. It has been overwhelming to stand-by and experience the children push their boundaries in more ways than one can imagine. These children have made me believe in the expecting the unexpected. I have learned to wait for magic to unfold, just as the ABT structure points to a direction the child leads the way as we, as facilitators wait and learn from them. Trusting the self through intents, it has made the entire experience more meaningful and magical.

5.3 Future:

The research study is a beginning to build on the buddy systems and peer learning. Taking this forward would require step-by-step understanding of how social systems work and what these children require. The purpose is not to re-invent the wheel of human condition in socialisation but provide safe environment for the children to communicate the way in which each one chooses to, keeping in mind the therapeutic domains and goals. Continued sessions will facilitate holistic growth and make them more independent.

With most of the literature review found, there were areas that highlighted how music therapy, art therapy and drama therapy can enhance social communication, peer interaction and buddy system but not so much within internal special needs groups. There are many who backed this system with mainstream peers and have successful modules and research to prove so. This research using Arts Based Therapy has looked at creating internal peer buddy systems within the special needs groups which has triggered larger questions on approaches to learning and the spaces these children will share in the future. It is imperative to look into more positive and accepting spaces where the child will feel a sense of community and freedom.

Appendix

In this section

- Glossary of important terms
- Appendix A (Social and Communication Development Observational Chart)
 - A 1.1 (for Parents)
 - A 1.2 (for Teachers)
 - A 1.3 (for Facilitators)
- Appendix B (Oral Motor Observational Chart)
- Appendix C (References)
 - C 1 (for 2.1 Larger Problem)
 - C 2.1 (for 2.3 Literature Review – Play and Drama Therapy)
 - C 2.2 (for 2.3 Literature Review – Music Therapy)
 - C 2.3 (for 2.3 Literature Review – Art Therapy)
- Appendix D (Drawings and Paintings)
 - D 1.1 (Partner sessions)
 - D 1.2 (Group sessions)
- Appendix E (SRS Summary Formats)

Glossary

ABT – Evidence-based use of art forms to accomplish individualized goals within a therapeutic relationship

ASD – Autism Spectrum Disorder

P2C2E – ‘Process Too Complicated to Explain’ - *Also inspired by Haroun and the Sea of Stories, P2C2E is a acronym for **Processes Too Complicated To Explain**, we all wish we had a Grand Controller to read Thought Beams to which we can tune in and listen whenever we wished to do so!*

Appendix A 1.1

Social and communication development questionnaire FOR PARENTS					
Child's Name					
Age		Sex	Male	Female	
Parent/ Guardian's Name					
Sibling's Name/s					

Please read the following questions and tick the appropriate columns that are relevant to your child.
All responses are confidential.

1 Does s/he come up to you spontaneously to chat?	Sometimes	Often	Never
2 Was s/he speaking by 2 years old or earlier?	Yes	No	Maybe
3 Does s/he appear to notice unusual details that others miss?	Sometimes	Often	Never
4 Is it important for him to fit in a peer group?	Yes	No	Maybe
5 Did s/he spend a lot of time with pretend play (e.g., play-acting being superhero or actors from movies or with a doll) when he was younger?	Sometimes	Often	Never
6 Does s/he find it easy to interact with other family members and relatives? (even if it is non-verbal)	Sometimes	Often	Never
7 Can s/he keep a two-way conversation going?	Sometimes	Often	Never
8 Does s/he have friends (home, neighbours, relatives, cousins), with whom s/he finds a connect?	Yes	No	Maybe
9 Does s/he often bring you things s/he is interested in to show you?	Sometimes	Often	Never
10 Does s/he enjoy joking around?	Sometimes	Often	Never
11 Does s/he play imaginatively with other children and engage in role-plays?	Sometimes	Often	Never
12 Does s/he make normal eye-contact?	Sometimes	Often	Never
13 Does s/he have any unusual and repetitive behaviour or movements? If any please specify	Yes	No	Maybe
14 Does s/he have/ use any odd or unusual phrases? If any please specify	Yes	No	Maybe
15 Is his/her social behaviour very one-sided and always on his/her own terms?	Sometimes	Often	Never

16	Does s/he call you from a distance? (for help or to get your attention)	Sometimes	Often	Never
17	Does s/he ask wh-questions in relation to activities, familiar and unfamiliar?	Sometimes	Often	Never
18	Does s/he like going outdoors? (cycling, shopping, walks)	Sometimes	Often	Never
19	Does s/he like any particular toy/doll/ blanket/ book which comforts him/her? If any please specify.....	Yes	No	Maybe
20	Does the child portray any behavioural issue that concerns you? If so, how often does it occur.....	Yes	No	Maybe

Appendix A 1.2

Social and communication development questionnaire FOR TEACHERS					
	Child's Name				
	Age		Sex	Male	Female
	Facilitator's Name				
	Frequency of sessions with the child (in a week)				

Please read the following questions and tick the appropriate columns that are relevant to the child. All responses are confidential.

Social skills

- 1 Is it important for him to fit in a peer group?
- 2 Does s/he imitate actions of his peers? (verbal and non-verbal)
- 3 Does s/he follow directions from peers? (verbal and non-verbal)
- 4 Does s/he respond to answer/questions from a peer?
- 5 Does s/he respond to peer play-initiations?
- 6 Does s/he initiate play with his/her peers?
- 7 Does s/he comment/s to peer/s during play?
- 8 Does s/he ask or offers assistance to peers during play?
- 9 Does s/he often bring you things s/he is interested in o show you?
- 10 Does s/he enjoy joking around?
- 11 Did s/he spend a lot of time with pretend play (e.g., play-acting being superhero or actors from movies or with a doll)?
- 12 Does s/he make normal eye-contact?
- 13 Does s/he pair up with peers with no resistance during sessions?
- 14 Is s/he good at turn-taking during play and other activities?
- 15 Does s/he require to be initiated to interact with his/her peers?

Expressive

Yes	No	Maybe
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never
Sometimes	Often	Never

17	Does s/he ask wh-questions in relation to activities, familiar and unfamiliar?	Sometimes	Often	Never
18	Does s/he ask wh-questions when provided with vague information?	Sometimes	Often	Never
19	Does s/he states 'I don't know' to unfamiliar questions?	Sometimes	Often	Never
20	Does s/he have difficulty understanding the rules for polite behaviour?	Sometimes	Often	Never
21	Can s/he recall past events?	Sometimes	Often	Never
22	Does s/he listens to conversation and answer questions about the conversation?	Sometimes	Often	Never
23	Does s/he portray any behavioural issues in a group that is of concern?	Sometimes	Often	Never
24	Does s/he try to seek your attention during play or activities?	Sometimes	Often	Never
25	Does s/he defend himself/herself during social situations?	Sometimes	Often	Never

Appendix A 1.3

Social and communication development questionnaire FOR FACILITATORS					
Child's Name					
Age		Sex	Male	Female	
Facilitator's Name					
Frequency of sessions with the child (in a week)					

Please read the following questions and tick the appropriate columns that are relevant to the child. All responses are confidential.

Social skills

1 Is it important for him to fit in a peer group?	Yes	No	Maybe
2 Does s/he imitate actions of his peers? (verbal and non-verbal)	Sometimes	Often	Never
3 Does s/he follow directions from peers? (verbal and non-verbal)	Sometimes	Often	Never
4 Does s/he respond to answer/questions from a peer?	Sometimes	Often	Never
5 Does s/he respond to peer play-initiations?	Sometimes	Often	Never
6 Does s/he initiate play with his/her peers?	Sometimes	Often	Never
7 Does s/he comment/s to peer/s during play?	Sometimes	Often	Never
8 Does s/he ask or offers assistance to peers during play?	Sometimes	Often	Never
9 Does s/he often bring you things s/he is interested in o show you?	Sometimes	Often	Never
10 Does s/he enjoy joking around?	Sometimes	Often	Never
11 Did s/he spend a lot of time with pretend play (e.g., play-acting being superhero or actors from movies or with a doll)?	Sometimes	Often	Never
12 Does s/he make normal eye-contact?	Sometimes	Often	Never
13 Does s/he pair up with peers with no resistance during sessions?	Sometimes	Often	Never
14 Is s/he good at turn-taking during play and other activities?	Sometimes	Often	Never
15 Does s/he require to be initiated to interact with his/her peers?	Sometimes	Often	Never
Expressive			

17	Does s/he ask wh-questions in relation to activities, familiar and unfamiliar?	Sometimes	Often	Never
18	Does s/he ask wh-questions when provided with vague information?	Sometimes	Often	Never
19	Does s/he states 'I don't know' to unfamiliar questions?	Sometimes	Often	Never
20	Does s/he have difficulty understanding the rules for polite behaviour?	Sometimes	Often	Never
21	Can s/he recall past events?	Sometimes	Often	Never
22	Does s/he listens to conversation and answer questions about the conversation?	Sometimes	Often	Never
23	Does s/he portray any behavioural issues in a group that is of concern?	Sometimes	Often	Never
24	Does s/he try to seek your attention during play or activities?	Sometimes	Often	Never
25	Does s/he defend himself/herself during social situations?	Sometimes	Often	Never

Scale

(0-1)	(2-3)	(4-5)
Never	Sometimes	Often

Appendix A 2 (Observational charts for Oral Motor)

	Name of Child:	Date:
	Tongue	
1	open and close mouth/ wide	Excellent/ Good/ Average/ Fair/ Poor/ No
2	stick out tongue	Excellent/ Good/ Average/ Fair/ Poor/ No
3	mouth circles - put tongue around all teeth	Excellent/ Good/ Average/ Fair/ Poor/ No
4	Lick upper/ lower lip	Excellent/ Good/ Average/ Fair/ Poor/ No
5	make de, le, ne, te sounds	Excellent/ Good/ Average/ Fair/ Poor/ No
	Lip	
1	pucker lips	Excellent/ Good/ Average/ Fair/ Poor/ No
2	lick lips	Excellent/ Good/ Average/ Fair/ Poor/ No
3	fill cheeks with air	Excellent/ Good/ Average/ Fair/ Poor/ No
4	exaggerated sad face	Excellent/ Good/ Average/ Fair/ Poor/ No
5	make bha, maa, fff, ppa, vva,	Excellent/ Good/ Average/ Fair/ Poor/ No
	Other exercises	
1	hold a smile for 5 secs	Excellent/ Good/ Average/ Fair/ Poor/ No
2	show teeth	Excellent/ Good/ Average/ Fair/ Poor/ No
3	make vowel sounds a,e,i,o,u	Excellent/ Good/ Average/ Fair/ Poor/ No
4	make consonant sounds w, r, t	Excellent/ Good/ Average/ Fair/ Poor/ No
5	make zzzzzzz sound	Excellent/ Good/ Average/ Fair/ Poor/ No
6	Chew and swallow	Excellent/ Good/ Average/ Fair/ Poor/ No
7	Blow a candle/into a straw/bubbles/musical instruments	Excellent/ Good/ Average/ Fair/ Poor/ No
8	Suck from a straw	Excellent/ Good/ Average/ Fair/ Poor/ No
9	Is able to say few words in English/ other languages	Excellent/ Good/ Average/ Fair/ Poor/ No
10	Is able to make sounds of varying volume	Excellent/ Good/ Average/ Fair/ Poor/ No

Scale

(1-2)	(3-4)	(5-6)	(7-8)	(9-10)
Poor	Fair	Average	Good	Excellent

Appendix B

ABT Tools for assessments – Embodiment Projection Role – To assess the levels of EPR and see if there are any transitions made during the project time.

Embodiment – Name:

Date:

Embodiment Techniques: Jennings S, (Glastonbury 2002)

Areas of focus	Activity conducted						Recommendations
• gross body movement		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• fine body movement		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• sensory movement		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• singing , rhythmic movement and dance		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• stories with sounds and movement		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	

Projective Techniques: Jennings S, (Glastonbury 2002)

Areas of focus	Activities conducted						Recommendations
• play with substance		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent/ responds without prompts	
• play with pictures		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent/ responds without prompts	
• play with material		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent/ responds without prompts	
• play with toys		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent/ responds without prompts	
• play with scenes		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent/ responds without prompts	

Role Techniques: Jennings S, (Glastonbury 2002)

Areas of focus	Activities conducted						Recommendations
• roles with single feelings		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• characters that interact		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• stories to enact		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• dressing up		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	
• projective play		No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent / responds without prompts	

Scale

(1-2)	(3-4)	(5-6)	(7-8)	(9-10)
No responses	Requires constant help	Requires some help after prompts	Responds with prompts	Independent/ responds without prompts

Appendix C

C 1 - References for Larger Problem

1. Autism & The Medical Establishment: An Uneasy Relationship.- Jagannath Chatterjee, <http://www.latimes.com/news/local/la-me-autism-day-one-html,0,1331687.htmlstory>
2. World Health Organization. Training in the community for people with disabilities. WHO: Geneva; 1989.
3. Reddy MV, Chandrasekhar CR. Prevalence of mental and behavioural disorders in India: A meta-analysis. *Indian J Psychiatry* 1998; 40: 149-57
4. National Sample Survey Organization. A report on disabled persons. Department of Statistics, Government of India: New Delhi; 2003.

C 2 - Literature Review

C 2.1 Play and Drama Therapy

1. Jennings S, (Glastonbury 2002) - retrieved from-
<http://www.suejennings.com/epr.html>
http://www.nasponline.org/publications/booksproducts/BP5Samples/549_BPV71_33.pdf
2. (Sue Jennings Playful Parenting 2011) – retrieved from -
<http://www.suejennings.com/images/pfl.pdf>
3. Chari M, (2008) – ‘Educational Management of Students with Autism Spectrum Disorders’, Prachee Publications, Hyderabad 40-41
4. Winner M, Social Thinking website - retrieved from
<http://www.socialthinking.com/what-is-social-thinking>

C 2.2 Music Therapy

- Duffy B, Fuller R: **Role of Music Therapy in Social Skills Development in Children with Moderate Intellectual Disability.** *Journal of Applied Research in Intellectual Disabilities* 2000, **13**(2):77-89. www.biomedcentral.com 20 June 2012
- Gallagher TM: **Interrelationships among childrens language, behavior, and emotional problems.** *Topics in language disorders* 1999, **19**(2):1-15
www.biomedcentral.com 20 June 2012
- Aldridge D, Gustorff D, Neugebauer L: **A pilot study of music therapy in the treatment of children with developmental delay.** *Complementary Therapies in Medicine* 1995, **3**:197-205. www.biomedcentral.com 20 June 2012
- Mongillo, Antonietta; ‘The discovery of Motivating Factors in Music Therapy Communication’,
<http://www.wlu.ca/soundeffects/researchlibrary/AntoniettaMongillo.pdf> (12 june 2012)

C 2.3 Visual Art Therapy

1. www.healwithart.com (20th June 2012)
2. Ullamnn, Pamela; (Art therapy and Children with Autism: Gaining Access to Their World through Creativity) www.arttherapy.com (20th June 2012)

Appendix D – Drawings and Paintings of study group

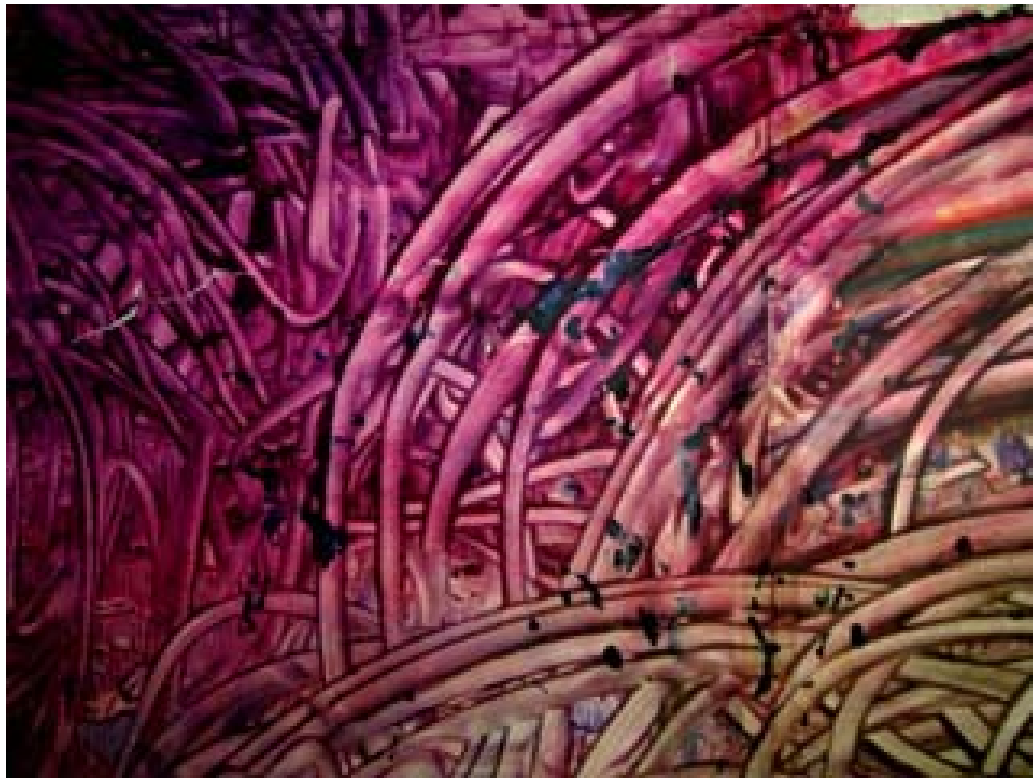
D 1.1 Partner sessions





D 1.2 Group sessions







Appendix E (SRS Summary Format)



Session no	Date/ Time	Therapeutic Goals	Metaphors	Artistic Communion -Ritual and Artistic preparation	Artistic Creation	Closure
1	13th June 2012 10:30 am - 11:30 am	Social Dynamics - Turn taking, Leading, Following, Initiation and Motivation	down memory lane	Circle up song, circle in/out, slow/fast, ringa-ring	Sing familiar songs and embodiment - 'Lakdi khi kaati', 'Naani teri', 'Gaada gaada', 'Baadal garejeh', 'boogie woogie' and 'I like the flowers'	Circle up, sit down, breathe in/out, slow/fast, vocalisation -a,e,i,o,u, rub your palms fast/slow, rub your laps fast/slow, rub the floor fast/slow, rub your palms, your eyes, your friends' face and blow. Hug your friends and say thank you
2	14th June 2012 10:30 am - 11:30 am	Social Dynamics - Turn taking, Leading, Following, Initiation and Motivation	down memory lane	circle up song, circle in/out, slow/fast, ringa-ring	Sing familiar songs and embodiment - 'Lakdi khi kaati', 'Naani teri', 'Gaada gaada', 'Baadal garejeh', 'boogie woogie' and 'I like the flowers'	Circle up, sit down, breathe in/out, slow/fast, vocalisation -a,e,i,o,u, rub your palms fast/slow, rub your laps fast/slow, rub the floor fast/slow, rub your palms, your eyes, your friends' face and blow. Hug your friends and say thank you
3	15th June 2012 10:30 am - 11:30 am	Social Dynamics - Turn taking, Leading, Following, Initiation and Motivation, keep a look out for peer buddying and partnering.	down memory lane	Circle up song, circle in/out, slow/fast, ringa-ring	Sing familiar songs and embodiment - 'Lakdi khi kaati', 'Naani teri', 'Gaada gaada', 'Baadal garejeh', 'boogie woogie' and 'I like the flowers'	circle up, sit down, breathe in/out, slow/fast, vocalisation -a,e,i,o,u, rub your palms fast/slow, rub your laps fast/slow, rub the floor fast/slow, rub your palms, your eyes, your friends' face and blow. Hug your friends and say thank you



4	19th June 2012 10:30 am - 11:30 am	Social Dynamics through Embodiment/movement- Turn Taking, Leading, Following. Keep a look out for peer Budding among the group	RollerSkates	circle up song, circle in/out, slow/fast, ringa-ringa, walk straight lines, criss-cross, sit down and introduce the activity by giving marbles. Let them feel it - talk about round and rolling it.	while they are sitting roll them around the space and catch them. (make sure they do not throw them on the floor or each other), move around, crawl to catch them. Make partners and roll and catch them. Introduce more marbles, roll them around let the group catch it.	ask the group to collect the marbles and drop them into a large bowl, circle up and sit around the bowl and breath in/out, slow/fast, rub-rub palms, lap, floor slow/fast, face, eyes, friends' face and blow. Hug your friends and say thank you.
5	20th June 2012 10:30 am - 11:30 am	Social Dynamics through Fine Arts- Turn Taking, Leading, Following. Keep a look out for peer Budding among the group.	RollerSkates	circle up song, circle in/out, slow/fast, ringa-ringa, introduce the activity by giving marbles - roll them around the space and catch them. (make sure they do not throw them on the floor or each other)	open the large sheet and paste it to the ground with the help of the children, talk about creating lines with marbles - demo of rolling the marble in a plate of paint and roll it on the paper. Give plate of paint to each child and let them explore.	clean/wash up (facilitate to be independent), clean the space, the banners, remove art t-shirts and sit down for breath in/out, slow/fast, rub- rub palms, lap, floor slow/fast, face, eyes, friends' face and blow. Hug your friends and say thank you.
6	21st June 2012 10:30 am - 11:30 am	Social Dynamics through movement/sensory for EPR using water- Turn Taking, Leading, Following. Focus on sensory response to the medium among the group.	Pebbles n Puddles	Take children to the terrace area, let them explore space with walk slow/fast, circle up song, in/out, slow/fast, jump in/out, ringa- ringa, sit down -criss-cross, tap-tap, splash-splash, flow	lead the children to water tub in pairs, let them explore the medium, tap-tap, splash-splash, drop marbles and ask the children to pick it up and drop it in a bowl outside the water tub.	clean/wash up (facilitate to be independent), clean the space, remove art t-shirts and sit down for breath in/out, slow/fast, rub-rub palms, lap, floor slow/fast, face, eyes, friends' face and blow. Hug your friends and say thank you.



7	25th June 2012 10:30 am - 11:30 am	Social Dynamics through movement - Turn Taking, Leading, Following. Focus on movement of limbs and arms, bi-partial co- ordination and try above with partnering in groups.	A Puppet without strings	Take children to the terrace area, let them explore space with walk slow/fast, circle up song, in/out, slow/fast, jump in/out, ringa- ringa	one end to the other - walk slow/fast, run-run fast/slow, crawl slow/fast, on your tummy - drag self across, stand up in circle- hands up/down, round- round, sit down, stretch legs, hug your knees, sit criss-cross	massage legs, arms and face, lie down and breathe. Sit up rub-rub palms, eyes, friends and blow. Hug your friends and say thank you
8	27th June 2012 10:30 am - 11:30 am	Social Dynamics through movement- Turn Taking, Leading, Following. Focus on fine movement and participation from all children	Blowin in the wind...	Circle-up, in/out, slow/fast, jump in/out, hands up/down, round-round, ringa-ringa,	give out newspaper, move Up/down, round-round with music. Let it explore for a while. Then tear the paper into small pieces, throw it up and catch it as it falls down.	Collect the tiny pieces and put them into the bin. Sit down criss-cross, breath, vocalise a,e,i,o,u and rub-rub palms, eyes, friends' face and blow. Hug friends and say Thank you.
9	28th June 2012 10:30 am - 11:30 am	Social Dynamics through movement- Turn Taking, Leading, Following. Focus on fine movement and participation from all children	Blowin in the wind...	Circle-up, in/out, slow/fast, jump in/out, hands up/down, round-round, ringa-ringa,	give out newspaper, move Up/down, round-round with music. Let it explore for a while. Then tear the paper into small pieces, throw it up and catch it as it falls down.	Collect the tiny pieces and put them into the bin. Sit down criss-cross, breath, vocalise a,e,i,o,u and rub-rub palms, eyes, friends' face and blow. Hug friends and say Thank you.
10	2nd July 2012 10:30 am - 11:30 am	Social Dynamics- Turn Taking, Leading, Following and Speech- vocalisation through Drums and songs	Jingle Jangle Tamborine Man	circle-up, in/out, slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, ask the children to get a chair to set up a circle, keep drums in the center.	get ready for the drums- rub- rub palms, clap-clap, tap-tap and hands up for stop. Give out drums and explore.	collect the drums in the centre and stck up chairs. Sit down criss-cross, massage hands, breath, vocalise a,e,i,o,u and rub-rub palms, eyes, friends' face and blow. Hug friends and say Thank you.
11	5th July 2012 10:30 am - 11:30 am	Social dynamics- Turn Taking, Leading, Following and Speech- vocalisation through embodiment and songs	Jukebox-clap for a song	circle-up, in/out, slow/fast, hands up/down, jump in/out, ringa-ringa	sing familiar songs and embodiment - 'Lakdi khi kaati', 'Naani teri', 'Gaada gaada', 'Baadal garejeh', 'boogie woogie' and 'I like the flowers' with embodiment.	sit down, vocalisation- a,e,i,o,u, and breath in/hold/out, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.



12	6th July 2012 10:30 am - 11:30 am	Social Dynamics and Speech and vocalisation through outdoor activities - walk in the park	little miss sunshine	introduce the walk to the mini forest in class, make partners-walk down, put on shoes and walk to the park (facilitate them to help each other)	walk around the park as partners, let them explore the space on their own, sit when they are tired and sing songs. Walk back	remove shoes, walk back to class and sit down criss-cross, massage limbs, arms and face, breath in/out, vocalise a,e,i,u,o, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
13	10th July 2012 10:30 am - 11:30 am	Social Dynamics through partnering activities	polka dotted lines	Circle-up, in/out, fast/slow, jump in/out, hands up/down, ringa-ringa	walk around the space fast/slow, follow eachother, partner up walk together point to point, freeze, crawl, lie down and push yourself ahead.	sit down criss-cross, stretch your legs, hug your knees, breath in/hold/out, vocalise a,e,i,o,u, introduce bba, mma, zzz, burrr, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
14	12th July 2012 10:30 am - 11:30 am	Social Dynamics and Speech and vocalisation through outdoor activities - structured play	wheels of the bus	circle-up, in/out, fast/slow, jump in/out, hands up/down, ringa-ringa, pick up tyres	let them explore playing with the tyres, introduce rolling the tyres from one end to another. Push, roll, chase. Then Spin the tyres, sit inside the tyres and push forward, get other children to cheer for eachother.	line it up and let them walk inside partners helping eachother. Stack up the tyres, sit criss-cross, stretch legs, hug your knees, massage limbs, breath in/out, vocalise a,e,i,o,u, bba, mma, zzz, burr, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
15	13th July 2012 10:30 am - 11:30 am	Social Dynamics and Speech - vocalisation through outdoor activities - walk in the park	little miss sunshine	introduce the walk to the mini forest in class, make partners-walk down, put on shoes and walk to the park (facilitate them to help each other)	walk around the park as partners, let them explore the space on their own, sit when they are tired and sing songs.	Eat snack at the park, breath in/out, vocalise a,e,i,u,o, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.



16	16th July 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Following and Leading, Speech - Vocalisation and articulation, Memory and Embodiment	Jukebox-clap for a song	circle-up, in/out, slow/fast, jump in/out, hands up/down, ringa-ringa slow/fast	Sing songs requested by the children, make sure each child gets a turn to choose a song and to sing independantly while the rest repeat.	Sit down criss-cross, stretch your legs, hug your knees, breath in/hold/out, vocalise a,e,i,o,u, introduce bba, mma, zzz, burrr, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
17	18th July 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Following and Leading, Speech - Oral Motor exercises through Fine arts	Anteater	circle-up, in/out, slow/fast, jump in/out, hands up/down, ringa-ringa slow/fast, breath in blow out through mouth, set up class, banner, chowkies,	partner the children in pairs, let them blow into the straw and later give out paper and paints. Drop little blobs of paint on the paper and ask children to blow with straw	Clean-up, wash up (independently/help each other), wash banner, bowls and paint brushes, sit in circle criss-cross, breath in/out, vocalise a,e,i,o,u, and say OM rub-rub palms, face, friends' face and blow. Hug friends and say Thank you.
18	20th July 2012 10:30 am - 11:30 am	Social Dynamics and Speech and vocalisation through outdoor activities	Red Balloons	circle-up, in/out, slow/fast, jump in/out, hands up/down, ringa-ringa slow/fast, breath in blow out through mouth, sit in pairs and give out bubble blowers in one tray	Allow the children to explore on their own, let them help each other. Assist pairs to buddy each other and share the material. Run, chase, catch and burst bubbles.	Clear up space and sit down to breath in/out, vocalise a,e,i,u,o, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
19	25th July 2012 10:30 am - 11:30 am	Social Dynamics and Speech and vocalisation through outdoor activities - structured play	wheels of the bus	circle-up, in/out, fast/slow, jump in/out, hands up/down, ringa-ringa, pick up tyres	let them explore playing with the tyres, introduce rolling the tyres from one end to another. Push, roll, chase. Then Spin the tyres, sit inside the tyres and push forward, get other children to cheer for eachother.	line it up and let them walk inside partners helping eachother. Stack up the tyres, sit criss-cross, stretch legs, hug your knees, massage limbs, breath in/out, vocalise a,e,i,o,u, bba, mma, zzz, burr, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.



20	26th July 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Leading, Following and Speech- vocalisation through Drums and songs	Jingle Jangle Tambourine Man	circle-up, in/out, slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, ask the children to get a chair to set up a circle, keep drums in the center.	Get ready for the drums- rub-rub palms, clap-clap, tap-tap and hands up for stop. Give out drums and explore.	Collect the drums in the centre and stick up chairs. Sit down criss-cross, massage hands, breath, vocalise a,e,i,o,u and rub-rub palms, eyes, friends' face and blow. Hug friends and say Thank you.
21	30th July 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Leading, Following and Speech - Vocalisation, expression and articulation through using puppets to enact characters/ roles	Pinocchio	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, sit down	introduce a surprise element/ new friend coming into class, get the puppet out, change voice, take time to interact with each child, improvise- songs, talk, etc	Bid farewell to the puppet and sit criss cross, breathe in/hold/out, vocalise a,e,i,o,u and tub rub palms, eyes, friends' face and blow. Hug friends and say Thank you
22	31st July 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Leading, Following and Speech - Vocalisation, expression and articulation through using puppets to enact characters/ roles	The Parrot Frog	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, sit down	Bring out Parrot frog and introduce the stick puppets. Let the children explore the puppets - talk/sing songs/ story.	Take the puppets back to the puppet box, sit in criss-cross, massage hands/ fingers, breathe in/hold/out, vocalise a,e,i,o,u and tub rub palms, eyes, friends' face and blow. Hug friends and say Thank you
23	1st Aug 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Leading, Following and Speech - Vocalisation, expression and articulation through using puppets to enact characters/ roles	The Parrot Frog	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, sit down facing the puppet booth	facilitator perform with a stick puppet, then invite children in pairs to perform. Let the child choose his/her puppet, Give them their time to explore the new space while singing familiar songs/ talking in different voices	Take the puppets back to the puppet box, roll-up the puppet booth, sit in criss-cross, massage hands/ fingers, breathe in/hold/out, vocalise a,e,i,o,u and tub rub palms, eyes, friends' face and blow. Hug friends and say Thank you



24	2nd Aug 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Leading, Following and Speech - Vocalisation, expression and articulation through using puppets to enact characters/ roles	The Parrot Frog	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, sit down facing the puppet booth	tell them their friends are coming to watch the performance, after audiences settle, get each child to perform in pairs and with their choice of puppet and songs.	Thank the audience, after they leave, Take the puppets back to the puppet box, roll-up the puppet booth, sit in criss-cross, massage hands/fingers, breathe in/hold/out, vocalise a,e,i,o,u and tub rub palms, eyes, friends' face and blow. Hug friends and say Thank you
25	3rd Aug 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Following, Leading, Initiation and Motivation, Speech-Vocalisation, expression and articulation	little miss sunshine	introduce the walk to the mini forest in class, make partners-walk down, put on shoes and walk to the park (facilitate them to help each other)	walk around the park as partners, let them explore the space on their own, sit when they are tired and sing songs.	walk back, remove shoes, walk back to class and sit down criss-cross, massage limbs, arms and face, breath in/out, vocalise a,e,i,u,o, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
26	6th Aug 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Following, Leading, Initiation and Motivation, Speech-Vocalisation, expression and articulation through fine arts	raindrops	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa, make rain sounds with snapping, clapping hands, lap and floor	pair the group and give out materials. Tape the black sheets onto the floor with the help of the child. Give out crayons-instruct them to take their crayon on a walk around the sheet. Later ask them to stand and drop paint onto the sheets	Clean up, wash up and sit in criss-cross for breathe in/out, vocalise a,e,i,o,u, and say OM rub-rub palms, face, friends' face and blow. Hug friends and say Thank you.
27	7th Aug 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Following, Leading, Initiation and Motivation, Speech-Vocalisation, expression and articulation through Role-Play	Pandora's Box	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Get them to sit in front of eachother and explore the materials.	Get them to sit in front of eachother and explore the materials on themselves and each other.	Clear/ clean-up the space and sit in criss-cross for breathe in/out, vocalise a,e,i,o,u, and say OM rub-rub palms, face, friends' face and blow. Hug friends and say Thank you.



28	8th Aug 2012 10:30 am - 11:30 am	Social Dynamics - Turn Taking, Following, Leading, Initiation and Motivation, Speech-Vocalisation, expression and articulation through Role-Play	Pandora's Box	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Get them to sit in a circle and explore the materials.	let them take on characters, change voice and dress up. Go for a walk and let the children take on roles and introduce themselves to others outside the class.	Get back to the class, remove costumes, pack up the prop box and sit down for closure ritual - breathe in/out, vocalise a,e,i,o,u, and say OM rub-rub palms, face, friends' face and blow. Hug friends and say Thank you.
29	9th Aug 2012 10:30 am - 11:30 am	Oral Motor exercises for Vocalisation, expression and articulation, Social Dynamics with turn-taking, following and leading	Red Balloons	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Get the children's to pack their snack in the picnic bag. Wear shoes	Walk to the park pairs, hold hands and run around, play running and catching, play with bubbles, make the children blow bubbles while the others chase/catch/burst them.	Spread picnic mat, sit on them, breathing exercises - in/out, vocalise a,e,i,o,u and say OM, rub-rub palms, face, friends' face and blow. Hug friends and say thank you. Eat snacks and clean up and walk back to center.
30	13th Aug 2012 10:30 am - 11:30 am	EPR- based focus of enacting and embodying characters, vocalisation - expression and articulation, social dynamics with turn-taking, following, initiation	Tell a Tail a Tale	Start the session with the basic ritual, change voice to become a sutradar play the dhol and announce the story. Get them to sit to listen.	Dramatise the story, exaggerate characters and ask frequent questions, get the children to imitate characters and take on roles. Story - 'Goldilocks and the Three Bears', expressions - happy, sad, cry, scared, surprise, laughter and snore, sing - 'when goldilocks went to the house of the bears'	take all the characters, dramatically pull them out of the children and put them into the drum/ instrument - bid farewell and sit down for basic breathing, vocalisation a,e,i,o,u, say OM, rub-rub palms, face, friends' face and blow. Hug your friends and say thank you.
31	14th Aug 2012 10:30 am - 11:30 am	Main focus is social dynamics through group and partnering, leading and following, Speech - Vocalisation and expression	Catgroove	Start session with basic vocalisation exercises with basic ritual - circle in/out to count 1,2,3,4, Jump in/out and body jam with 1-4 count, vocalise a,e,i,o,u to 1-4 count high/low and introduce siren high/low	Give out drums, warm up by rub-rub of hands on drum and start 1-4 beats. Partner up with call response of names of children, rumble and stop-cut. Sing familiar songs and keep pulse.	rub-rub on the skin of the drums and keep the drums in the center. Still in partners massage each others' hands and fingers. Hold hands and breathe in/out, vocalise a,e,i,o,u, high/low and siren, bee buzz and bike sounds. Rub-rub palms, face, friends' face and blow, hug friends and say thank you.



32	16th Aug 2012 10:30 am - 11:30 am	Main focus is social dynamics through group and partnering, leading and following, and EPR-based focus of making characters and projecting to make objects and pretend play	Atta Ghallatta	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Sit down to do hand/ finger warm-ups- open/close lap and floor, rub-rub hands, lap and floor	sit around the watermelon table and keep dough in the centre, get the children take as much dough as they can and let them explore the medium, introduce sticky/goosey/stretch/press/pinch let them create objects out of it, stick the dough together into the bowl.	clean-up and sit down to repeat hand/finger massage and breathe in/out, vocalise a,e,i,o,u, high/low and siren, bee buzz and bike sounds. Rub-rub palms, face, friends' face and blow, hug friends and say thank you.
33	17th Aug 2012 10:30 am - 11:30 am	Main focus is social dynamics through group and partnering, leading and following, and EPR-based focus of making characters and projecting to make objects and pretend play	Atta Ghallatta	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Sit down to do hand/ finger warm-ups- open/close fast/slow, clap, tap - hands, lap and floor, rub-rub hands, lap and floor	sit in pairs or groups of three and give out the kitchen sets and market sets. Let the group explore, enact and play. Initiate role play. Towards the end clear up by putting all the material into the prop box and sit down to sing 'channa kaise booya'	breathe in/out, vocalise a,e,i,o,u, high/low and siren, bee buzz and bike sounds. Rub-rub palms, face, friends' face and blow, hug friends and say thank you.
34	20th Aug 2012 10:30 am - 11:30 am	Main focus is Social dynamics through group and partnering, EPR-based- working with material (maida) making creations through play	Crop Circles	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Bring out banners and set up class with the help from the children.	Bring out the huge sheet and the maida paste, introduce the activity by giving them the maida, let them explore, introduce mixing paint in the maida and later mixing two colours, let them explore and play. Introduce the activity again with partnering.	Clean-up and sit down to breathe in/out, vocalise a,e,i,o,u, high/low and siren, bee buzz and bike sounds. Rub-rub palms, face, friends' face and blow, hug friends and say thank you.
35	23rd Aug 2012 10:30 am - 11:30 am	Main focus is Social dynamics through group and partnering, EPR-based working with material (maida) making creations through play	Crop Circles	Circle-up, in/out, Slow/fast, jump in/out, hands up/down, round-round, ringa-ringa. Bring out banners and set up class with the help from the children.	Bring out the single sheets and pair up children, give the maida paste to share, let them explore, introduce mixing paint in the maida and later mixing two colours, let them explore and play.	Clean-up and sit down in pairs, massage each others' hands and hold hands to breathe in/out, vocalise a,e,i,o,u, high/low and siren, bee buzz and bike sounds. Rub-rub palms, face, friends' face and blow, hug friends and say thank you.

Acknowledgements

I acknowledge with joy and gratitude:

All the students in my study group who have showed me how to push boundaries and believe in magic again.

I am indebted to the entire team at Magic Puddles – Arts Based Therapy Center for Special Needs, J.P Nagar for encouraging me at every stage and lending a hand and a hug when doubt clouded my eyes.

A Special thanks to Mr. C. Somashekar and the trustees of Somu Charitable Trust.

My mentor and guide, Gitanjali Sarangan for being a constant source of inspiration, for trusting me through many crazy endeavours and allowing me to thread along this wonderful journey with the children at Magic puddles. For introducing me to the many sides of the 'self' and the 'universe'.

To maraa – media collective, Bangalore for their endless support in lending their equipment and guiding me through the many processes of this project.

To Meghana Rao for extending her time and patience in video documenting the sessions and being ready with gears and gadgets to capture the expected and the unexpected.

To Yashaswini B. R, for spending endless hours discussing and understanding the intent of the project and helping me edit and tell the stories of the children as it was and as they are.

To Poornima Subramanian for allowing me to use one of her art works as cover page for the project.

To Kamma, for being a rock and supporting me at every stage of the project.

To my sister for allowing me to hog all her laptop and internet privileges.

To my younger brother and 'masrah' for being the source of inspiration to find meaning in the arts.

To grandmother, mother and father for being, well themselves.

To Asha, Aanand, Zubin and Deborah for guiding me in this journey of the arts, the self and the universe.

To theatre, music, films and the written word.

In all humility I hand over my merits to the service and healing of all sentient beings.

