The Unfinished Painting- An Arts Based Therapy Approach as an Early Intervention Module for Children with Autism Spectrum Disorder

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ABSTRACT

BACKGROUND

Autism is a developmental brain disorder characterized by impaired social communication and limited range of activities and interests. The aim of this study is to evaluate the efficacy of Arts Based Therapeutic Interventions in improving the motor, cortical arousal, vocalization and self-expression skills among children with autism.

METHODS

This is a prospective cohort study conducted on a group of 9 children with autism chosen through random sampling. The tools used were Childhood Autism Rating Scale, Vineland Social Maturity Scale, observation schedules of parents, teacher and neutral observer along with Arts Based Therapy Tools of E-P-R (embodiment-projection-role) in clay and free scribble drawing.

RESULTS

There was a significant increase in the levels of vocalization and self-expression in children after 2 months of intervention. This shows that regular music and art allow for building the bridges in brain anatomy and help to increase target behaviours and promote a composite increase in the level of functioning of the child.

CONCLUSIONS

Arts based interventions help to provide children the template to comprehend and process complex instructions and motor functioning, thus allowing for a complete mind body functioning of children.

KEYWORDS

Autism, Arts, Therapy, Intervention

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BACKGROUND

Children with autism spectrum disorder are characterized by their inability for effective social reciprocity and communication skills, a general lack of responsiveness to other people, serious deficiencies in communication skills especially language and unusual repetitive responses to the environment. Perseveration and stereotypies may be evident, and they often exhibit fascination for various inanimate objects. An insistence on sameness is common and they may become catastrophically anxious if the familiar routines are transgressed. Autistic children are known to have difficulties in sharing attention with others. It has been reported that when cues such as pointing, or language were added or when feedback from targets was given their performance improved.¹ Music as therapy facilitates mental functioning and learning of children with autism, in that it mobilizes and strengthens coordination of reasons, not because it would provide cognitive stimulation or because it would lead to the perception of time musical or disclosure by the melody. The musical improvisations encourage episodes of concerted activity, help controlling anxiety, contributing to a coherent awareness and memory, and communicating more effectively.² In a pilot study which reported the potential of Theatre as a social intervention for autistic children, it was observed that children became better communicators and were able to generalize those skills to the classroom.³ We wanted to evaluate as to whether arts therapy can be a beneficial mode of intervention in children with autism spectrum disorder.

METHODS

This is a prospective cohort study in which the sample consisted of 9 children diagnosed with autism selected through random sampling from a special school in Mumbai. All the students have had experience with some informal schooling. They undergo occupational therapy and special education as a part of their regular curriculum. Students were enrolled after taking approval from institutional Ethics Committee for Human Research and school.

Inclusion Criteria

Children diagnosed as having autism spectrum disorder, who have been in the current setup of schooling for a minimum of a year and a maximum of 3 years and whose parents were willing to give written informed consent were included in the study.

Exclusion Criteria

Children not having autism spectrum disorder or whose parents were not willing to give written informed consent were excluded from the study.

Tools

Childhood Autism Rating Scale (CARS)⁴: It is an interview schedule consisting of 15 domains rated on a 7-point Likert scale with the range of 1-4 with mid-point ranges also

included. Total score ranges from 15-60, with a minimum score of 30 serving as the cut-off for a diagnosis of autism on the mild end of the autism spectrum.

Vineland Social Maturity Scale (VSMS)⁵: It consists of a 117-item interview with a parent or other primary caregiver. Personal and social skills are evaluated in areas of daily living skills, communication, motor skills, socialization, occupational skills and self-direction.

Observation schedules designed in line with the therapeutic goals of each child were filled out by parents, teachers and neutral observer.

Initially, children were exposed to various mediums and their comfort with each was explored in the one-month pilot project phase. Following this, the therapeutic domain as well as the individual therapeutic goals for children was planned. All the assessment tools were administered before the beginning of the action research phase for a baseline score. In the following action research phase, the children met with the therapist for their 30 minutes one on one session twice a week for a total of 16 sessions over 2 months. The scores obtained at the end of 16 sessions were recorded as the after score.

Statistical Analysis

Data collected was entered in Excel sheet master chart and appropriate statistical tests i.e., frequency, mean, standard deviation and t test were applied.

RESULTS

	M	Mean		S.D.				
	Pre	Post	Pre	Post	i iest			
Relating to People	2.94	1.67	0.46	0.43	14.35*			
Imitation	3.61	2.06	0.49	0.46	9.17*			
Emotional Response	3.39	2.33	0.60	0.66	4.32*			
Body Use	2.22	1.67	1.18	0.71	2.55*			
Object Use	1.83	1.50	1.17	0.87	1.93			
Adaptation to Change	1.33	1.33	0.71	0.71	0.00			
Visual Response	2.44	1.78	0.95	0.62	3.97*			
Listening to People	2.33	1.72	0.50	0.67	0.28			
Taste Smell and Touch	1 70	1.61	1.09	0.86	1.43			
Response and Use	1.70							
Fear or Nervousness	1.33	1.00	0.71	0.00	1.43			
Verbal Communication	3.56	2.78	0.53	0.44	8.88*			
Non-verbal Communication	2.56	2.11	0.53	0.33	2.05			
Activity Level	1.67	1.22	1.00	0.44	1.87			
Level and Consistency of	2 11	3.11	0.60	0.60	0.00			
Intellectual Response	5.11							
General Impression	2.78	2.61	0.67	0.70	1.43			
Total	36.89	28.50	7.47	6.91	8.42			
Table 1. Findings on Subscales of Childhood Autism Rating Scale								
(*n<0.05 ovol)								

	М	Mean		.D.	TToot			
	Pre	Post	Pre	Post	riest			
Self-Help General	9.11	9.67	2.85	1.66	1.3			
Self-Help Eating	5.89	6.44	2.57	2.01	1.6			
Self-Help Dressing	3.78	3.89	2.22	2.15	1.0			
Socialization	0.89	2.11	1.36	0.78	4.4*			
Locomotion	4.33	4.78	1.66	0.67	1.3			
Communication	1.33	3.22	1.12	1.2	7.2*			
Self-Direction	0.00	0.00	0.00	0.00	0.0			
Table 2. Findings on subscales of Vineland Social Maturity Scale								
(*p<0.05 level)								

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Children were in the range of 5 years to 12 years, with two children each of 5 years, 7 years, 8 years and 9 years of age and one child 12 years old. 7 were males and 2 females.

DISCUSSION

Children showed significant improvement in the areas of relating to people, imitation, body use, verbal communication, visual response and emotional response. The difference in scores may be due to two major factors. Firstly, the therapeutic intervention of Arts Based therapy integrates the non-structured mediums of art, music and drama. The availability of a safe space for creation without any boundaries provides a platform for children to engage in an open and free dialogue. Also, the various mediums allow the child to communicate in ways not just limited by verbal or non-verbal. This further enhances and accelerates the attempts of the child at vocalization and subsequently verbal communication. Secondly, ABT works from the Subtle Energy Guide (SEG), which is a clear and broad outlook based on a theoretical understanding of "Health - and its various stages". This SEG view is guided by the Buddhist view of the Mind. It gives a foundation to ABT, providing it a deeper and more progressive view of the client and of reality itself. This view allows for the therapist to create newer avenues and provide for ample opportunities in the children for new learning.⁶ As pointed out from studies in neuroscience discussing the concept of 'primal empathy', the ability of individuals to unconsciously employ a "low road" to rapidly scan and interpret another individual for issues of safety and trust. Neural circuitry connecting such areas as the sensory cortices, thalamus and amygdala, as well as multiple systems of mirror neurons allow some individuals to bridge brains.7

The scores on VSMS show a significant increase in the areas of socialization and communication. These changes can be further explained by the methodology that ABT implements. ABT works with the baseline of metaphors which provide a way of relating and rapport building without having to possess any particular language ability. A metaphor provides the avenue by which bridges can be easily built with a child, providing him the security and safety of expression without judgement. A branch of science known as Embodied Cognition holds that human thought is deeply shaped by its interconnection with the body and by the

inherent nature of human sensory and motor processes.⁸ This explains that a metaphor provides the bridge between the sensory, motor processes and thereby the cognition.

CONCLUSIONS

The study helps to highlight that communication in the form of relatedness. Vocalization and self-expression in children with autism can be significantly achieved through Arts Based Therapy Intervention. This is evidence for the early intervention models in autism spectrum disorder which will help in prompt development of the neural circuitry earlier in children thereby promoting better ability to grasp and process the avenues for interaction. Increasing awareness among teachers and parents is also required.

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