The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 9, Issue 2, April- June, 2021
DIP: 18.01.024.20210902, DOI: 10.25215/0902.024
http://www.ijip.in

Research Paper

Cognitive and Social Behavior-An Intervention Study on An Autistic Child with Delayed Development

Prachi Sharma[1]*, Anukampa Sharma[2], Kusum Parante[3]

ABSTRACT

The study was conducted with intention to know the differences of effect of ABA technique on Autistic children with normal development and delayed development. With the same thought the researcher conducted an intervention study on an Autistic child with delayed development. Intervention was done to improve the cognitive and social behavior in the child by using ABA Technique. The identified problem behaviour in child was 1. Does not sit at one place for required time, 2. Does not pay attention to instructions and 3. Screams. To identify Problem behaviors in child an Indian Standardize Check list named BASIC-M. R was used. Problem behaviours were selected on the basis of scores of checklists, behavior observation of the child and parental interview. The identified functions behind problem behaviours were self-stimulatory, skill deficient, escape and attention seeking. In the beginning sessions the therapist established good repo with child to make him comfortable with her. In later sessions it was done with using physical and verbal prompting technique and providing various Differential Reinforcements to the child. The study result reveals that the percentage of poor performance are gradually decreasing and the percentage of good responses are increasing despite of changing in activities based on their difficulty level during the sessions. It is also being proven that ABA technique is very effective technique for the Autistic children with delayed development as well.

Keywords: *Autism, Developmental Delay, Behavior Modification*

Autism spectrum disorder (ASD) is rapidly increasing in India and all over world. Its causes are still vague. Many more researches have been done to identify its root but could not get any clear result yet which can prove the basic factor responsible for autism. In past researches we can see that few external and internal factors are there which may affect the child's mental health and can push an infant toward ASD.

The basic features of Autism are poor social and communication skills with some inappropriate behaviour; which is mainly due to sensory disturbance/ imbalance in infant or child. These children may show repetitive actions and easily gets irritate and shows anger.

[1]Faculty of Psychology, B.M. Institute of Mental Health, Ahmedabad, Gujarat, India
[2]PhD Scholar, GFSU, Gandhinagar, Gujarat, India
[3]Rehabilitation Psychologist, Independent Practitioner, Ahmedabad, Gujarat, India
*Corresponding Author

Received: March 12, 2021; Revision Received: April 06, 2021; Accepted: April 25, 2021

Children become very fussy if someone tries to train or teach them something. Children's with their choosy nature and stubborn behaviour does not get exposed with age appropriate activities and behaviour due to which their cognitive and social skills start getting lagged.

ABA technique is well known technique to train and teach the children with autism. It includes prompting, reinforcement. Task analysis and time delay procedure during the sessions. Through this technique at early age a therapist can show major improvement in child and may reduce autistic features by managing their behavior. ABA training (Landa, 2007), is commonly used with children with autism, because it offers reinforcement items that motivate children to continue to work combined prompts to elicit the correct response. Prompting of specific behavior and communication becomes more predictable and is highly effective when working with new children to the program. A more specific type of training which is Discrete Trial Training (DTT) based on one-on-one formula. Sometimes ABA training and DTT used interchangeably as DTT used within the overall form of ABA Training.

In a study Robert L. Koegel and William D. Frea suggested that the possibility of identifying pivotal response classes of social communicative behavior that may facilitate the understanding of social behavior in autism as well as improve peer interaction, social integration and social development.

A study by Solomon and Chung (2012) that autistic children sensory seeking behavior such as crashing, spinning and flapping. Children with autism spectrum disorder often have memory strengths and the quality of using visual information (Schneider & Goldstein, 2009). They have the quality of remembering the information for long time, which is used as strength during intervention.

Seitler (2011) believes that, the behavioral treatments for autism spectrum disorder are mostly derived from Applied Behavior Analysis. According to Glynne & Owen (2010), Applied Behavioral Analysis teaches children a standardized skill set following an established pattern. The intervention using behaviorist principles of stimulus/response and differential treatment has improvement in socially meaningful behavior (Steege, Mace,Perry & Longencker, 2007).

Brief about case (child)

A male child at the age of 4 years 5 months brought by his parent for the treatment. Parents had lots of query about their child and was looking very much upset as they had no clear cut idea about the child's problem. They were looking for the accurate diagnosis as previously they had got some rough idea about the child's condition. They were already taking the child for speech therapy as child's speech was not up to the mark, which was clearly visible; but they themselves reported that they are not finding any significant improvement in child even after 1 year.

Their complaints about the child were-

Verbatim (translated in English from Hindi- "The child does not sit at one place and does not respond properly. He has stubborn nature and gets very irritate if demand is unfulfilled. He does not speak age appropriate and shows temper-tantrum a lot. He kisses and touches others frequently. Child screams badly and slams door. He does not cooperate during task and plays alone. He grinds his teeth frequently."

Treatment Procedure

After completion of registration, screening was done in the multidisciplinary professional's Team, including Psychiatrist, Psychologist, Occupational Therapist, Speech Therapist, Special Educator, child was assessed as with delayed development at mild level with the autism spectrum disorder.

The recommended management plan for the child was initially as an essential need of Parental counselling to make them prepare with the positive approach and to work with the experts for the child betterment as a team and also for a longer period. Sensory Integration Therapy with the Diet therapy for children with autism were started immediately to make the child little acquainted with the new exposure in the therapeutic set-up. After fifteen days from the time behaviour modification with social skill training followed by speech therapy, were started applying on child.

After receiving therapies (SIT and Diet) the child shown good improvement and started sitting for 2-3 minutes which was need to shape by providing skill training. Behaviour modification started to improve the level of sitting tolerance in child at the same time behaviour therapist was focusing on the cognitive practices during the sessions with providing social skill training as well through different kind of activities.

Behaviour Modification intervention on child

On recommendations from the experts, child was brought by his parent to the Behaviour Modification and Counselling Unit of OPD, BM Institute where all the necessary procedure such as behavioural assessment, identifying the functions etc. were done to start the behaviour modification sessions with child. Regular parent counselling was also continued with the sessions.

The initial (baseline) cumulative scores were-
Behaviour Assessment Scale for Indian Children –MR- Part A (Pre/Post)- 292/650
Behaviour Assessment Scale for Indian Children (BASIC –MR) - Part A –MR Part B - 48

Rewards were also identified with help of mother's information. Child likes to play with ball and bat, basketball, playing musical instruments and song listening, writing work, picture books, coloring.

Target Behaviour

Based on the problem behaviour assessment checklist, the therapist selected three major problem behaviours to correct, with consent of his mother. This are-

1. Does not sit at one place for required period of time
2. Does not pay attention on instructions
3. Screams

An interview of parents on the problem behaviours in child was taken by the therapist to get an idea about the provoking/ supporting factors behind the problem behaviour with their frequency. Therapist also observed the child's behaviour for 1 day (first session) to understand him better before starting therapy.

Identified Functions behind the Problem Behaviours

The functions working behind selected problem behaviours were found as-

1. Self-stimulatory Behaviour
2. Skill Deficit
3. Attention seeking
4. Escape

Therapy started using Applied Behaviour Analysis (ABA) technique to shape the child's behaviour and reduce problematic behaviour with help of help of reinforcement technique. Recording of sessions was done in detail to see the rate of effect on child in different phases.

Few sessions from second quarter recording are mentioned bellow to show the recording pattern-

Table 1: Showing pattern of sessions recording

Session	Activities	Duration	Technique used	Obstacles during sessions	Co-operation
Session - 69	Abacus, Shapes, Box with small ball to put inside from the different shapes	30 min	Physical and Verbal Prompting with DRA	Due to restlessness frequent mistakes, poor eye contact	Fair (following instructions mostly in 1 prompt in the beginning of activities)
Session - 70	Continued same activities by changing their order	35 min	Physical and Verbal Prompting with DRA &DRL	Restlessness with poor eye contact	Fair (better than the last day) (as child had to go for his native for 7 days, same activities were suggested to the mother to do at home regularly at least for 30 minutes)
Session - 71	Continued same activities of last session	40 min	Physical and Verbal Prompting with DRA &DRL Mild physical restraint	Restless and was very excited, throwing objects fair eye contact	Fair (cooperation level was lesser than the last session)
Session - 72	Continued same activity with adding threading beads also	45 min	Physical and Verbal Prompting with DRA &DRL	Impulsiveness, fair eye contact during activity	Fair (except for few time children performed only on verbal prompt)
Session - 73	Continued the same with changing their order and duration	45 min	Verbal Prompting with DRA	Impulsivity (reduced) with fair eye contact	Good (was cooperative and trying to wait for next instruction)
Session - 74	Replaced shapes with animal's puzzle board	45 min	Verbal prompting with DRA	Impulsivity (level was reduced)	Good (In this session child enjoyed with all the

	in the activities and Continued same			Searched for the shapes for 2 minutes which was removed	activities and was very cooperative)

*__Note:__ *The child had poor eye contact which is gradually improving. As the therapist is using those activities also which supports the cognitive skills in children and is helpful in his cognitive development. Through modeling now therapist is focusing on his social skill development during the fourth quarter.*

TEST RESULT

Based on the scores received through Behavioural assessment checklist, the result is discussed below:

Table: 2- Showing child's Pre and Post Scores on BASIC–MR Part A at

Domains	Pre- Score (%)	Post- Score (%)
Motor	77	85.5
Activity of Daily Living	26	68
Language	18.5	55
Reading-Writing	10.5	49
Number-Time	2	16
Domestic-Social	9	37.5
Prevocational-Money	3	14

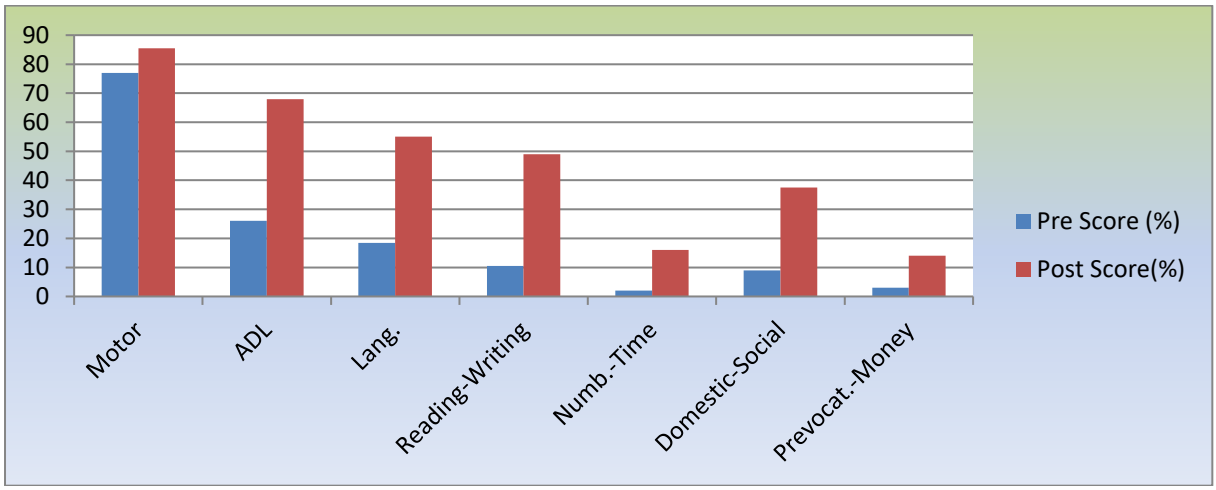

Figure 1 showing difference percentage between Pre and Post scores on the scale.

BASIC –MR Part B

Table 3 to 6 showing child's score differences on BASIC–MR Part B (Problem Behaviour)

Baseline Scores on Different Domains

DB	DiB	MO	SIB	RB	OB	HB	ReB	AsB	F
12	04	04	05	06	08	06	03	0	0

First Quarter Scores on Different Domains

DB	DiB	MO	SIB	RB	OB	HB	ReB	AsB	F
06	01	03	03	03	04	06	03	0	0

Second Quarter Scores on Different Domains

DB	DiB	MO	SIB	RB	OB	HB	ReB	AsB	F
04	01	03	01	02	03	03	02	0	0

Third Quarter Scores on Different Domains

DB	DiB	MO	SIB	RB	OB	HB	ReB	AsB	F
03	01	03	0	01	01	02	01	0	0

*DB = Destructive behaviour; DiB=Disruptive behaviour; MO= Misbehave with others; SIB= Self injurious behaviour; RB= Repetitive behaviour; OB= Odd behaviour; HB=Hyperactive behaviour; ReB=Rebellious behaviour; AsB= Anti-social behaviour; F=Fear.

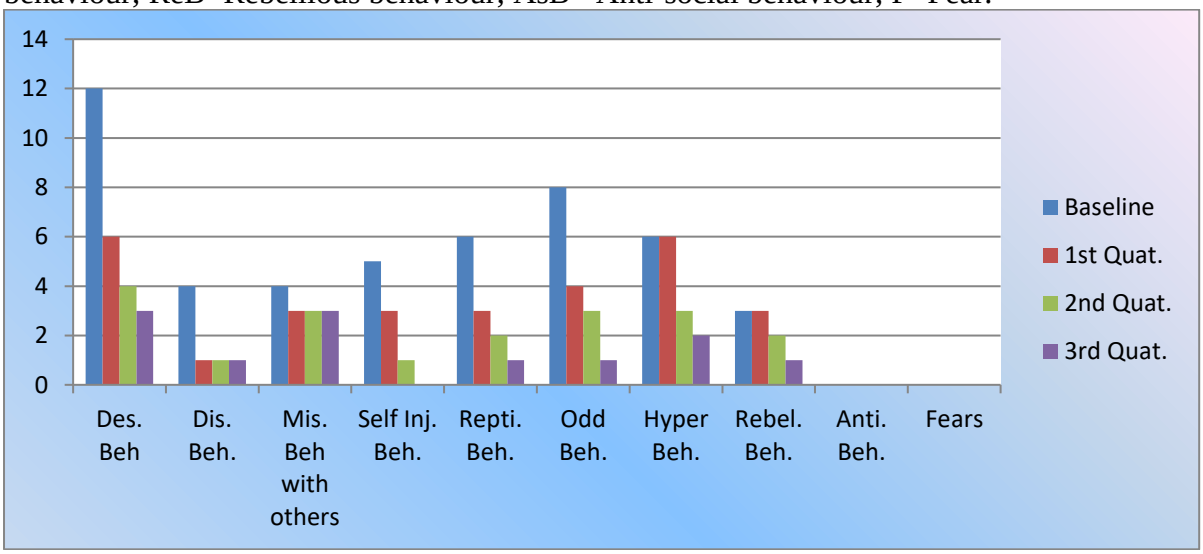

Figure 2 showing differences between the scores on each quarter.

Table 7 showing cumulative scores of all four quarters.

Assessment	Cumulative Scores
Baseline	48
First Quarter	28
Second Quarter	19
Third Quarter	12

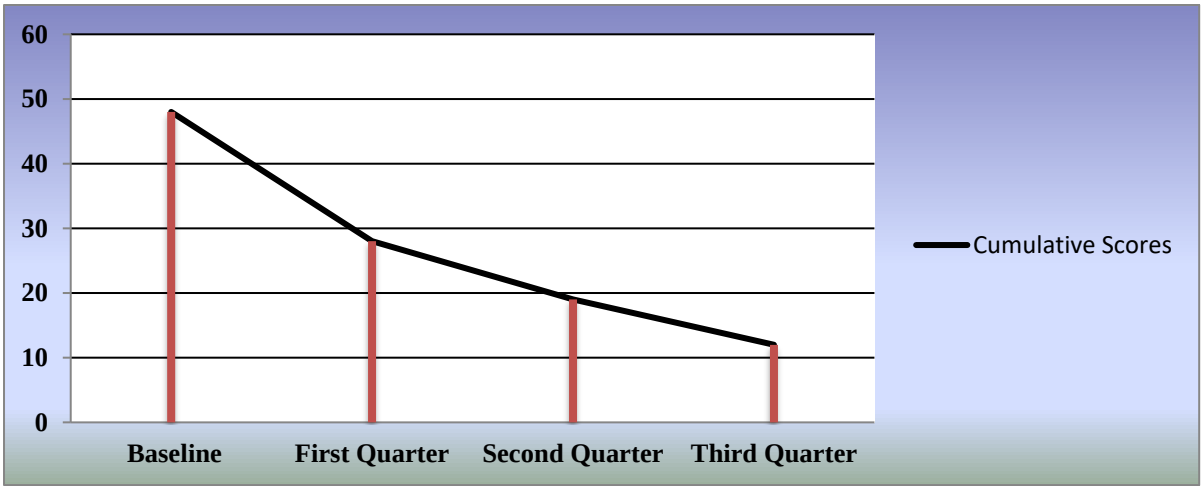

Figure 3 showing differences in each quarter after providing interventions to the child

Table 8 showing percentage of the cooperation level shown by child during sessions

Quarters	Cooperation Level	Percentage
Baseline	Poor	48.27
	Fair	34.49
	Good	17.24
1st Quarter	Poor	30.77
	Fair	51.92
	Good	17.31
2nd Quarter	Poor	18.37
	Fair	44.90
	Good	36.73
3rd Quarter	Poor	00
	Fair	54.55
	Good	45.45

**Fourth quarter was only of 2 months when the data was taken to arrange and calculate.*

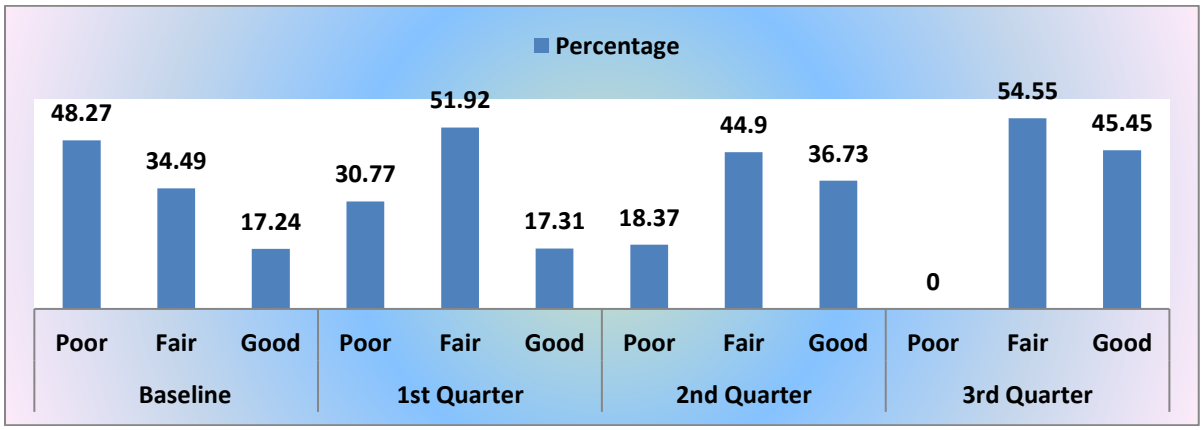

Figure 4 showing differences in each quarter on level of cooperation shifting toward good from poor

Interpretation

Figure 1, shows the differences seen in the child after providing behaviour modification therapy. The domains of activity of daily living, language, reading-writing, number-time, domestic-social and pre-vocational-money. Less difference is observed in the motor function as the child had no as such motor difficulty.

The Figure 2 shows that the frequency of problem behaviour on different domains is reducing gradually by using ABA technique for modifying the behaviour. A wide decrease has been observed in the destructive behavior of the child. The disruptive behavior found decreasing in the first quarter after which it is constant. The misbehavior of the child with others has decreased slightly in first quarter, and later is constant till the third quarter. Self-injurious behavior of the child has decreased on a wide range. The repetition of behavior of the child has also decreased gradually in the third quarter. The odd behavior of the child has also decreased a lot in the third quarter. Hyperactive and rebellious behavior of the child was constant till first quarter later, it has decreased in the child. The two main high scoring domains of destructive and odd behavior have been reduced gradually with help of behavior modification and other assistance.

The Figure 3, shows the cumulative scores of all the quarters. It also shows a continues decrease in the scores and the better behavior of the child. The cumulative score of 48 which was the baseline of target behavior has decreased to 12 score in the third quarter.

The Figure 4, shows the level of cooperation of the child with the therapist. It clearly can be seen in the figure that the steady decline in the poor cooperation during the session by the child. Shifting to fair cooperation from poor is also visible in the figure and the continuing good cooperation of the child is also can be clearly seen in the figure 4.
Therefore, the behavior modification techniques used by the therapist is found beneficial and effective for the child with autism spectrum disorder which is visible in the result as an altered behavior of the child.

IMPLICATIONS

1. This study can be helpful for the special teachers to apply the same techniques to control the children having autistic features and diagnosed as with some sensory related issues.
2. It can be helpful in handling children with SPD to the parents as well by reading the pattern used for the child.
3. It is giving an idea about Autism and it's related complications which may help to psychology professionals in developing it's Rehabilitation plan.

Limitations and Suggestions

1. This research is a single case study, so it is very tough to generalize with a big population.
2. This study was conducted on a child who was taking other therapies simultaneously with Behaviour modification.
3. The same research can be done on a big population to make it result more valid and reliable.

REFERENCES

Boyd,B., Odom,S., Humphreys,B.,& Sam,A., (2010). Infants and toddlers with autism spectrum disorder: early identification and early Intervention. Journal of Early Intervention, 32(2), 75-98.

Glynne-Owen, R. (2010). Early Intervention and Autism: The Impact of Positivism and the Call for Change. *International Journal of Children's Rights, 18*, 405-416. doi:10.1163/157181810x497431

Koegel, L. R., Frea, D., William, (2013). Treatment of social behaviour in autism through the modification of pivotal social skills. Journal of Applied Behaviour Analysis, 26(3), 369-377.

Landa, R., (2007). Early Communication development and intervention for children with autism. Mental Retardation & Developmental Disability Research Reviews, 13 (1), 16-25.

Schneider, N. & Goldstein, H. (2009). Using Social Stories and Visual Schedules to Improve Socially Appropriate Behaviors in Children with Autism. *Journal of Positive Behavior Interventions, 12*(3), 149-160. doi: 10.1177/1098300709334198

Seitler, B. N. (2011). Intricacies, Complexities, and Limitations of Research on Autism Treatments: An Examination of Seven Treatment Approaches. *Ethical Human Psychology and Psychiatry, 13*(2), 155-168. doi: 10.1891/1559-4343.13.2.155

Solomon, A.H. & Chung, B. (2012). Understanding Autism: How Family Therapists Can Support Parents of Children with Autism Spectrum Disorders. *Family Process, 51* (2), 250-264.

Steege, M. W., Mace, F. C., Perry, L. & Longencker, H. (2007). Applied Behavior Analysis: Beyond Discrete Trial Teaching. *Psychology in the Schools*, *44*(1), 91- 99. doi: 10.1002/pits.20208

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Sharma P., Sharma A. & Parante K. (2021). Cognitive and Social Behavior-An Intervention Study on An Autistic Child with Delayed Development. *International Journal of Indian Psychology*, *9*(2), 187-195. DIP:18.01.024.20210902, DOI:10.25215/0902.024