

# Behavior Modification Techniques for Autism: A Case Exploration

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## ABSTRACT

‘Autism’ or ‘Autism Spectrum Disorder’ is a neurological condition characterised by impairments in social interaction, difficulty in communication, and repetitive or stereotypic interest or behaviour patterns that interfere significantly with the normal functioning of an individual. There has been a wide variety of treatment approaches on the road to practice, yet behaviour therapy remains to be one of the key foundations of psychological care and management for children or adults diagnosed with Autism Spectrum Disorders. Behaviour modification techniques could be used effectively for regulating the behaviour patterns of young children in order to enhance their future life conditions. This Paper describes a case which is diagnosed as Autism Spectrum Disorder and the application of Behaviour Therapy.

**Keywords:** Autism, Behavior Therapy, Behavior modification, Prompting, Reinforcement

## INTRODUCTION

‘Autism’ or ‘Autism Spectrum Disorder’ is a neurological condition characterised by impairments in social interaction, difficulty in communication, and repetitive or stereotypic interest or behaviour patterns that interfere significantly with the normal functioning of an individual. There has been a wide variety of treatment approaches on the road to practice, yet behaviour therapy remains to be one of the key foundations of psychological care and management for children or adults diagnosed with Autism

Spectrum Disorders. New behavioural treatments (especially if applied during childhood) have shown great success in improving the social behaviour of individuals with autism, whereas in the past autism was seen as manageable illness with intensive support and structure.. Medical and mental health professionals can identify the signs of autism, help rule out other possible causes of the child’s behaviour, and refer the child to a specialist in behavioural therapy, most commonly applied behavioural analysis, the approach which has most proven success rates. Behavioural interventions and techniques are designed to reduce problem behaviours and teach functional alternative behaviours using the basic principles of behaviour change. These methods are based on behavioural/operant principles of learning; they involve examining the antecedents that elicit certain behaviour, along with the consequences that follow that behaviour, and then making adjustments in this chain to increase desired behaviours and/or decrease inappropriate ones. Behavioural interventions range from one-to-one discrete trial instruction to naturalistic approaches that focus only on communication, or on replacing maladaptive behaviours that are being used for communication. Behaviour modification techniques could thus be used effectively for regulating the behaviour patterns of young children in order to enhance their future life conditions.

## **CASE VIGNETTE**

Ms. A, 1 year and 8 months old female child, was brought up to the clinical set-up with complaints of age inadequate speech and language, stubbornness/ temper tantrums, bruxism, inappropriate social interaction, stereotypic behaviour, inattention, lack of concentration, and impairments in motor functioning.

The child has been the second issue to a non-consanguineous union. Her 35 year old father is a farmer; and 28 year old mother is a homemaker. She has an elder sibling who is 12 year old. The child has been staying with her parents in a nuclear family set-up. There has been an unspecified history of mental illness in both paternal and maternal families of the child. The child has a normal birth history as reported. The age of her mother at the time of conception was around 26 years. Foetal movements were reported to be active and Regular Antenatal Check-ups were done. The mother had an episode of severe abdominal pain in the third trimester that consequently resulted in hospital admission. It was a Full Term LSCS. Immediate birth cry was present. Birth colour was reported to be normal, and birth weight was 2.500 Kg. The child was breast-fed and immunised as per schedule. Apart from a respiratory infection that occurred at the age of 3 months, there is no reported history of any significant physical illness during post-natal period. The motor development of the child was reported to be normal up to 7 months, but delays were observed since then. The child uttered her first word at the age of 1 year, but has not attained any progress in speech and language milestones yet. She could recognise her mother and responds to her name while being called; but did not engage in any kind of social interaction as appropriate to her age. She did not maintain eye -to-eye contact with others and appeared to be disinterested in the people and happenings around. She has been closely attached to her mother and depends on her for all activities of daily living. The child enjoyed playing, but

prefers solitary play. Her span of attention was very less and she could not focus in play after a while.

## **CLINICAL EVALUATION/ IMPRESSION**

On clinical evaluation conducted at the age of 1 year and 8 months, the child appeared to have age inappropriate development. As per the scores obtained in Vineland Social Maturity Scale (VSMS), she was reported to have a Social Quotient of 60 corresponding to a Social Age of 1 year. This implied that she was having mild retardation in social and adaptive functioning. As per the results of Developmental Screening Test (DST), she was found to have a Developmental Quotient of 65 corresponding to a Developmental Age of 1 year and 1 month. This showed that she was having mild delay in development as well. And the result of CARS indicates Moderate level of Autism. However, based on her clinical symptoms and preliminary assessment, she was provisionally diagnosed as having features of Autism Spectrum Disorder.

## **CASE CONCEPTUALIZATION**

Based on the theory of behaviourism, the child was identified as having certain maladaptive behaviour patterns that had to be addressed immediately. Her stubbornness, temper tantrums, lack of attention, and stereotypic behaviours were taken as the core psychological patterns that induce a malfunctioning pattern. Principles of reinforcement and associative learning were taken as the mainstream apparatuses to address such maladaptive behaviours. Age of the child and immediate client goals were the major determinants of the therapeutic approach being suggested.

## **INTERVENTION PLAN**

As the child was reported to have features of Autism Spectrum Disorder, a modern behaviourist approach was undertaken towards the management of the

complaints including stubbornness/ temper tantrums, stereotypic behaviours, and other behavioural problems. Since she was below the age of 2 years, there were certain limitations in devising the intervention plan. However, treatment plan was structured according to the framework of behaviour therapy, solely based on the principles of secondary reinforcement being provided on the basis of a fixed ratio scale. 'Prompting' was adopted as the principal method of facilitating the therapy. Secondary Reinforcement refers to a situation where in a stimulus reinforces a behaviour after being previously associated with a primary reinforce or a stimulus that satisfies basic survival instinct such as food, drinks, and clothing. In this case, secondary reinforcements were provided if the child showed desirable behaviours, such as less stubbornness/ temper tantrums, or if she behaves in accordance with the simple instructions given by the therapist or her mother. Prompts (A prompt could be defined as a cue or hint that could be used to induce a particular behaviour or action) were given throughout in order to teach the child certain behavioural patterns (For example, she has to obey her mother if she wants to be carried in hand. The mother would not take her until and unless she stops crying and banging her head unnecessarily. In another instance, if the therapist prompts her to take objects and place it in the order of size, she should do it. Otherwise, the therapist would not clasp her hands in appreciation and as a sign of care). The intensity and modality of the prompts were regulated according to the behaviour of the child and variations in her responses. The nature of secondary reinforcement also varied according to the transgressions in the behavioural problems shown by the child. Immediate reinforcements were provided occasionally if the child engages in a highly desirable behaviour over time.

## **PROGRESS EVALUATION**

Progress Note -1

Client Risk Level (1-5): 3, Rate Case Difficulty (1-5): 3, Stuckness Level (1-5): 3  
Diagnostic Impressions: Autistic Spectrum Disorder  
Identify Legal, Ethical, Crisis issues to report to SVR : Nil

Subjective (S): It was reported that the client has been showing temper tantrums, stubbornness, and making odd sounds. She does not like to mingle with others, play with peer mates, and tends to exhibit stereotypic/ repetitive behaviors. The client was not oriented to time and place. Speech output was age inadequate and much information could not be elicited with regard to her subjective feelings.

Objective (O): The client appeared to be physically age appropriate. When her parents walked of the room, she started sobbing. But she could be calmed down after a while. The therapist was maintaining an intimate contact with the client to make her feel comfortable with the atmosphere. But, she was not responding and concentrating on the surroundings. She was presented with characteristic symptoms of autism including stereotypic behavior, marked impairment in social interaction, and communication.

Assessment (A): Based on the evaluation and supporting medical evidences, it was shown that the client could be diagnosed as having Childhood Autism/ Autism Spectrum Disorder.

Plan (P):

- To enhance basic concepts of the client.
- To improve her social interaction.
- To control problem behaviours.
- To reduce stubbornness/ temper tantrums.
- To reduce stereotypic behaviours.

Interventions (I): Since this was one of the preliminary sessions, no tasks were given to her. The primary goal of the session was to conduct a basic evaluation and build a good rapport with the client. Parental counselling

was done in order to make them aware about the situation of the client, and behavioral therapy was recommended; along with other necessary interventions.

#### Progress Note -2

Client Risk Level (1-5): 3, Rate Case Difficulty (1-5): 3, Stuckness Level (1-5): 3  
Diagnostic Impressions: Autistic Spectrum Disorder

Identify Legal, Ethical, Crisis issues to report to SVR : Nil

Subjective (S): The client was accompanied by her mother to the clinical set-up. She was restless and crying. It was reported that she has been showing temper tantrums, stubbornness, and stereotypic behaviors. However, the intensity of her stubbornness was reported to be low when compared to older times. Her span of attention was found to be longstanding comparatively. She was rendering while her name being called out. She started smiling at the therapist and others at home as well. Her stereotypic behavior patterns such as hand wringing, hand flapping, etc. and habit of bruxism have also been reported to be decreased.

Objective (O): The client appeared to be physically age appropriate, yet troubled by something. She was restless and not concentrating on anything happening around. She was not maintaining eye contact as well.

#### Assets:

The client is able to express her emotions.  
Able to attend external prompts for required period of time.

She could be interactive, if there is a given period of adaptation.

#### Weakness:

The client is not able to concentrate  
She has a feeling of insecurity, despite the assurance given by the therapist.

Inattention.

Problem Behaviors: Temper tantrums, Stubbornness, Stereotypic behaviors.

Assessment (A): Based on the evaluation and supporting medical evidences, it was shown that the client could be diagnosed as having Childhood Autism/ Autism Spectrum Disorder.

Plan (P): The major objective of the session was to enhance her attention and to reduce her restlessness at least for a short duration of time. The task given to her was to arrange objects in the order of size (rectangular cups). Attention could be aroused, but not sustained in her case.

Interventions (I): Behavior modification based on the principles of Secondary reinforcement and Prompting were used. It was decided that the client should be given various tasks that could help in improving her attention, concentration, and memory. Her parents should be prompted to challenge her extreme tantrums and other behavioral problems with secondary reinforcement. Regular follow up sessions are highly required.

#### Progress Note -3

Client Risk Level (1-5): 3, Rate Case Difficulty (1-5): 3, Stuckness Level (1-5): 3  
Diagnostic Impressions: Autistic Spectrum Disorder

Identify Legal, Ethical, Crisis issues to report to SVR : Nil

Subjective (S): After a significant number of sessions, it was reported that the client has been showing remarkable progress. It was noted that most of her behavioral problems could be addressed and reduced in its intensity.

Objective (O): The client appeared to be physically age appropriate, yet troubled by something. She was restless and not concentrating on anything happening around. The task given was to join beads

using a thread. She started performing the activity enthusiastically, but lost interest in it after a while. She dropped the beads and refused to do it despite verbal promptings given by the therapist. She was then given rectangular cubes to be arranged in the order of size. She was more comfortable with this and seemed to have interest in it. She could finish the task with the help of the therapist.

**Assessment (A):** Based on the evaluation and supporting medical evidences, it was shown that the client could be diagnosed as having Childhood Autism/ Autism Spectrum Disorder. As the sessions progress, minute improvements could be seen in her behavior/ condition. For example, her attention span has somewhat increased. Even though attention could not be sustained for required time, she could concentrate for much more than the previous sessions. She also started smiling at others occasionally.

**Plan (P):** The immediate plan is to enhance her social skills through conditioning which seems to be effective in her case.

**Interventions (I):** Based on the cumulative observations, it could be noted that the client has been showing progress over time. Even though there have been limitations in executing the treatment plan, the approach seems to be appropriate since the client is too young to be given much more complicated interventions. Her social interaction patterns are to be addressed through similar approaches now.

## **CURRENT STATURE**

At present, the child is 4 years old and reported to be functioning better. She has been undertaking behaviour therapy and speech therapy for the past 3 years, along with medication. Physiotherapy has also been done in order to improve her motor functioning. Her parents had noticed the problem at the age of 7 months due to delay in developmental milestones. They had consulted several medical practitioners since

then. She has also been taken for neurological consultation as there were multiple instances of mild febrile seizures. It was reported that the motor functioning of the child had regressed after a seizure episode at the age of 2 and a half years. However, there has been significant improvement in her behaviour and speech as clinically observed. She has started speaking with monosyllables and comprehends information quickly. Her stubbornness and temper tantrums have reduced. She does not grind her teeth (bruxism) very often and pays more attention to the external stimuli. Her stereotypic behavioural patterns have also been reduced. She has started maintaining eye contact and exchanges social smile with others. However, appropriate social skills training should be given to her, along with much needed follow-up sessions on a regular basis.

## **Feedback from the Therapist**

“Ms. A has been showing remarkable progress, says the therapist who has been treating her for a significant period of time. When she was presented to the clinical set-up for the first time, she appeared to be a totally detached child; but now, she has started interacting with others. It is quite pleasing to observe the minute improvements that she has been showing after each session” (Personal Communication, 2017). The therapist remarked that prompting and reinforcements provided on the basis of a fixed ratio scale have contributed much to her improvement. The major challenges were her age and associated physical disturbances, manifesting occasionally. But her family members, especially her mother has been very co-operative and ensured that all instructions given during the therapy sessions are being followed at home as well. Even though much time has been involved, a steady progress could be seen in her case record. The therapist also opined that this case could be taken as a good evidence for the effectiveness of behaviour modification

techniques in treating autism among young children.

### SUMMARY

Behaviour modification techniques based on the principles of Secondary reinforcement and Prompting could effectively used in the management and remedial care of young children who are having the features of Autism Spectrum Disorder. However, individual differences and socio-cultural contexts could mediate the results to a great extent. Nature of the therapeutic atmosphere, therapeutic alliance and familial support also play a vital role in determining the effectiveness of the therapy.

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