ABA FOR AUTISM SPECTRUM DISORDER: A CLINICAL CASE STUDY

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ABSTRACT

This case study explores the assessment and intervention process with autism spectrum disorder (ASD) for a 6-year-old male child. The child is presented with complaints of a lack of attention to the environment, lack of eye contact, deficient social communication skills, reactivity, and rigidity. The child was assessed with informal and formal assessments. Formal assessment includes The Childhood Autism Rating Scale (CARS), and Portage Guide for Early Education (PGEE), and informal assessment was also carried out. Formal, informal, and clinical interviews result in the diagnosis of ASD (mild-moderate severity level) requiring support in the social domain. The intervention of 20 sessions primarily focused on behavior therapy techniques, incorporating strategies such as Discrete trial training, differential reinforcement, shaping, and prompts. These techniques aimed to address the Child's challenges related to eye contact, social communication, reactivity, and rigidity. Post-assessment results revealed a significant reduction in attention-seeking behaviors, suggesting a positive trend in his responsiveness to behavioral interventions. This case study highlights the effectiveness of behavior therapy techniques in addressing specific challenges associated with autism spectrum disorder, emphasizing the importance of tailored interventions to enhance social functioning in individuals with ASD.

Keywords: Autism Spectrum Disorder (ASD), social skills, behavior therapy, ABA.

INTRODUCTION

Autism is a neurodevelopmental condition characterized as a spectrum disorder owing to the diversity of symptoms, variations in necessary support, and individual distinctions in symptomatology. It emerges usually at the age of 3 and persists throughout life (Cerminara et al., 2021; Hiremath et al., 2021). In the past, autism was frequently overlooked as a specific diagnosis, with its characteristics often attributed to developmental delays expected to resolve as the child matures. However, recent advancements in healthcare have brought about a greater awareness of autism. Consequently, both parents and healthcare professionals are now demonstrating increased interest in identifying and managing the condition (Calvin & George 2021). Globally, approximately one in 59 children are affected by ASD (Salari. N et al., 2022).

The current study will help to understand effective management plans for autism and involves tailored interventions such as Advanced Behavior Analysis. This approach aim to enhance individuals' capabilities and improve their overall quality of life.

Objectives of Study

The current study objective is to design and access a suitable behavior plan for the intervention of ASD symptoms special focus on the social domain.

Hypothesis of Study

Behavioral therapy techniques significantly improve social skills, social interaction, attention span, and rigidity in children with ASD.

METHOD
Research Design
A single case study designed to formulate an effective behavioral plan and its efficacy for the individual with ASD

Participant's Illness recount
The child lacks appropriate eye contact with both family members and strangers, displaying a lack of sensitivity to sounds and lights. Communication is a challenge for the child, and there are toileting issues. Usually, the child resorts to hitting himself with objects in the class, followed by crying and refusing to listen to anyone around him.

History from family
An interview was conducted with the child's mother to gain an understanding of the child's symptoms and condition. According to the mother, the child experienced seizures shortly after birth and again when he was 2.5 years old. These seizures were believed to be inherited from the father. Observed delay in the child's developmental milestones, attributing it to the seizures. However, at the age of 3.5 years, the child was diagnosed with a neurodevelopmental disorder Subsequently, the child was enrolled in a special education school. The child has a speech problem with no more than a few words. The child fairly independently manages tasks such as eating, drinking, washing hands, and brushing teeth. The child's favorite activities include playing with cars, and monster trucks, and looking at himself in the mirror. On the other hand, noted that the child exhibits a short attention span to the people and environment, gets busy with his things, and has minimal eye contact.

Background Information
The child is the last born and lives with a family of an older brother both parents, and both paternal grandparents. The primary language spoken at home is Urdu. The child formed an average bond with his mother and maintained a minimal relationship with his father, brother, and grandparents. However, the father tends to express anger when the child makes mistakes or ignores others. In the family, there is no mental health history.

Assessment
Informal assessment
The client's condition was observed through behavioral observation and a clinical interview with his mother. Reports from teachers and parents indicated difficulties in adapting to routine changes, attachment to objects, repetitive behaviors, lack of attention to the environment, and sensory sensitivities.

Formal assessment
Childhood Autism Rating Scale (CARS)
CARS (Schopler, Reichler, & Renner, 1988) was administered for the diagnosis of ASD. A score of 36 indicates a mild to moderate level of severity (30 being the cut-off score).

Portage Guide for Early Education (PGEE)
PGEE (Dunst, Trivette, & Cutspec, 2007) was administered to access socialization, self-help, language, cognitive, and motor areas. The result indicated the child needs support in language and especially social domains.

Intervention
To address a child's environmental focus, employing Applied Behavior Analysis (ABA) with fidget toys can keep them engaged. Focus enhancement was benefit from ABA's Discrete Trial Training and music therapy. Lack of eye contact was tackled through activities like Peek-a-Boo and visual motor tasks in occupational therapy. ABA, positive reinforcement, and social skills training prove effective for communication and interaction challenges. ABA's Differential reinforcement and token economy method were used to address self-hitting and reactivity issues. Moreover, a Picture exchange communication system was introduced to solve the lack of communication and enhance the vocabulary.

The intervention's progress was closely monitored, with adjustments made based on ongoing assessments and feedback. Positive outcomes were observed, including improvements in sitting behavior and attention span.

Autistic individuals have heightened sensitivities to language and changes in routine, making the use of "no" particularly impactful. For this purpose, differential reinforcement and shaping are administered to control reactivity, it is crucial to establish clear and consistent communication channels. Instead of a flat "no," provide options or

choices that still align with the desired outcome. Frame the response positively, focusing on what can be done rather than what cannot. For instance, "Let's try this instead".

Results and Conclusion
Table1.1
Representing pre- and post-assessment

Assessment Tool	Pre-testing results	Pos- testing results
Childhood Autism Rating Scale (CARS)	36- Mild to Moderate	-------

Portage Guide for Early Education (PGEE)	Significant impairment in social and language domain	Significant improvement in social and language domain

Post-assessment of PGEE indicated a significant and effective change in communication patterns (through PECS) and response & focus to the environment (through shaping music and differential reinforcement). Moreover, differential reinforcement and token economy significantly reduced the reactivity and crying spells.

Table 1.2
Represents The Therapy Goal

Activity Title	Description
Target Behavior	Communication skills, Environmental focus, reactivity, and crying Symptoms reduce to improve overall functioning.
Treatment Goals for Target Behavior	1. Enhance communication and social skills 2. To enhance the environmental focus 3. Reduce her reactivity and crying
Treatment Approach	Applied behavior analysis (ABA)

Table 1.3
Represents The Generalized Treatment Plan

Therapeutic Phase	Treatment Techniques
Initial Phase	Psycho-educate the family about the communication patterns of ASD Enhance communication through the PECS using prompts To reduce reactivity (self-hitting and crying) stop using the word No but suggest a different task
Middle Phase	DRL: reinforce when proper communication (at her level) is shown DRO: reinforcement (mirror presentation and cars) when the client doesn't react by self-hitting and crying DRA: Reinforcement (praise) when the client has normal social interaction only Use music or favorite rhymes to keep the child focused on the environment followed by reinforcement (shaping) Established a token economy system (reinforcement on every communication pattern and longer duration of focus while reducing reinforcers at every self-hitting or crying spell).
Termination Phase	Terminating the therapy upon reaching set goals. Encourage the client to ask others healthily.

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