



Effectiveness of ABA Therapy for Children with Autism and ADHD

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Abstract

Applied Behavior Analysis (ABA) plays a significant role in school settings in supporting students with Autism Spectrum Disorder (ASD) and also Attention Deficit Hyperactivity Disorder (ADHD) to some extent. ABA focuses on teaching new skills and reducing problem behaviors, creating an environment that promotes learning and social development. This study seeks to identify the obstacles facing by teachers working in a private institution named by Pannajhill Autism Welfare Society (Barasat, Kolkata, West Bengal-700125) with students affected with ASD and ADHD. It focuses on their use of ABA and its noticeable effectiveness upon children to establish a deep understanding of the phenomenon. The study used a qualitative approach, collecting data by means of interviews with teachers by using an open-ended, self-made questionnaire and analyzed using the thematic analysis method. This study highlights the significance of ABA strategies to reshape and enhance the behavior of ASD and ADHD affected students from the perspective of teachers.

Keywords: *Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Applied Behavior Analysis, Teachers, Behavior*

Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by early impairments in socialization and communication, as well as restricted interests and repetitive behaviors. Most children are diagnosed at the age of 3 years old, approximately 39% are not evaluated for the first time until after 4 years old (Yu et al., 2020). This impairment is attributable not only to the core symptoms of ASD, but also to a range of co-existing conditions that individuals with ASD often experience, including emotional and behavioral problems (i.e., anxiety, compulsions, aggression destruction and uncooperative behavior), sleep problems (i.e., difficulty in falling asleep, superficial sleep, early awakening and low sleep efficiency), feeding and eating problems, gastrointestinal problems, sensory sensitivities, learning and intellectual disabilities, as well as comorbid health and mental health diagnoses (Maskey et al., 2013). India is a populous country of nearly 1.3 billion people with children ≤15 years constituting nearly one third of the population. It has been estimated that more than 2 million people might be affected with ASD in India (Krishnamurthy, 2008). The problems experienced by students with ASD have a direct impact on teachers when it comes to their choice of the most appropriate strategies and interventions. The difficulties experienced by ASD students tend to create challenges for teachers, particularly as other disciplines have the advantage of historical and theoretical foundations for the most appropriate methods to be employed (Ashoor, & Bagadood, 2022).

Attention deficit hyperactivity disorder (ADHD) is a disorder of childhood and adolescence characterized by a pattern of extreme pervasive, persistent and debilitating inattention, overactivity and impulsivity. It is believed to be one of the most common reasons for mental health referrals to family physicians, paediatricians, paediatric neurologists and child and adolescent psychiatrists. Although originally thought to remit during childhood, the

symptoms of ADHD have also been shown to persist in patients through adolescence and into adulthood. The disorder is often chronic, with one third to one half of those affected retaining the condition into adulthood. It interferes with many areas of normal development and functioning in a child's life. Children with ADHD are more likely than their peers to experience educational underachievement, social isolation and antisocial behaviour during the school years and to go on to have significant difficulties in the post-school years (Thabet et al., 2010). There are many intervention approaches for treating ASD and ADHD including applied behavior analysis (ABA), diets and vitamins, floor time, holding, medication, sensory integration, speech and music therapy, special education etc. In recent decades, Applied Behavior Analysis (ABA) has become a well-supported and evidence-based treatment for the behaviours associated with ASD. Baer, Wolf, and Risley (1968) published a paper suggesting seven dimensions for studies conducted in the scope of ABA: applied, conceptually systematic, analytical, behavioural, effective, generalized, and technological (Baer et al., 1968). Rooted in the principles of behaviorism, ABA focuses on understanding how behavior is influenced by environmental factors and systematically applying interventions to encourage desired behaviors while minimizing those that are maladaptive. ABA has proven its efficacy in improving social communication skills, reducing challenging behaviors, enhancing adaptive functioning, and fostering independence in children with ASD. Traditionally, these interventions are delivered in clinical or educational contexts through structured sessions with trained professionals who rely on data-driven decision-making to customize support for each child. Despite the success of ABA in therapeutic settings, the potential of its core strategies remains underexplored in everyday, non-clinical contexts (Silva, 2025). As a therapy, ABA is a treatment of choice for ASD, with several decades of research demonstrating its effectiveness. However, the effectiveness of ABA for other neurodevelopmental disorder, ADHD is less known. Understanding the effectiveness would be important, especially for those working with individuals who have a comorbid diagnosis of ASD and ADHD (Engleman, 2024).

Review of Related Literature

For the present study the related resources have been studied. The reviews are given as follows-

Yu et al. (2020) researched on the topic 'Efficacy of interventions based on applied behavior analysis for autism spectrum disorder: a meta-analysis'; aimed to systematically evaluate evidence for the use of interventions based on applied behavior analysis (ABA) in managing various symptoms of autistic children. Here, 14 random control trials of 555 participants were included in the meta-analysis and compared the effectiveness of ABA in early start denver model (ESDM), picture exchange communication systems (PECS) and discrete trial training (DTT).

Maskey et al. (2013) studied on the topic 'Emotional and behavioural problems in children with autism spectrum disorder'. This showed the type, frequency and inter-relationships of emotional and behavioural problems in 863 children with ASD living in the north east of England. Here, a high rate of problems was reported with 53% of children having 4 or more types of problems.

Krishnamurthy, V. (2008) studied on the topic 'A clinical experience of autism in India' to present an analysis which shows estimates of 1 in 150 children in the USA having ASD and 2 in 2.3 million children with ASD present in India.

Ashour, J. T., & Bagadood, N. H. (2022) researched on the topic 'Teachers' perspectives on using applied behavior analysis strategies to students with autism spectrum disorder in Saudi Arabia: barriers and solutions'; focuses particularly on the use of Applied Behavior Analysis (ABA) strategies on students, as well as teachers' views concerning potential improvements in a school in Saudi Arabia. It used a qualitative approach, collecting data by means of individual semi-structured interviews with eight teachers of ASD students then analysed using the thematic analysis method. This study recommends that the competent authorities should obligate the

management of centres of special education to apply ABA strategies, in accordance with binding rules and regulations.

Thabet et al. (2010) conducted a study on the topic 'Attention deficit-hyperactivity symptoms among Palestinian children' aimed to establish the prevalence and distribution of attention deficit-hyperactivity disorder (ADHD) symptoms and other associated comorbid mental health problems in Palestinian school children. Thus, 349 children aged 6-15 years were randomly selected from 23 schools in Gaza and the West Bank and were rated by their parents and teachers using both the ADHD DSM-IV Checklist and the Strengths and the Difficulties Questionnaire. There was a significant agreement between parents and teachers, with 4.3% of the children rated above the established cut-off scores on both the parent and teacher DSM-IV Checklist.

Baer et al. (1968) published a paper suggesting seven dimensions for studies conducted in the scope of Applied Behavior Analysis (ABA) like applied, conceptually systematic, analytical, behavioural, effective, generalized, and technological dimensions.

Silva, J. F. (2025) conducted a study on the topic 'The application of applied behavior analysis (ABA) in the development of inclusive products for children with autism'. This paper explores the interdisciplinary application of ABA in the development of products such as adaptive toys, clothing, and footwear, aiming to enhance the daily experiences and developmental outcomes of children with ASD. The findings underscore the significance of a collaborative approach, bringing together behavior analysts, designers, and stakeholders to create products that are both functional and empathetic by embracing the principles of ABA in product development.

Butchart, et al. (2017) researched on the topic 'Autism and visual impairment: a review of the literature'. This study aimed to draw together existing knowledge of visual impairment and autism to establish the evidence 240 papers were reviewed. Here, the behavioral traits are established in association with both autism and visual impairment in literatures.

Shetty, A., & Rai, B. S. (2014) conducted a study on 'Awareness and knowledge of attention deficit hyperactivity disorders among primary school teachers in India'. The purpose of this study was to assess the awareness and knowledge of ADHD in elementary school teachers and the variables influencing that knowledge; where a self-report questionnaire was given to 312 teachers on socio-demographic information and assessed by 11 diagnostic symptoms for ADHD based on Diagnostic statistical manual (DSM-IV-TR) criteria. This study reveals the knowledge about ADHD is rather poor among primary school teachers and only 9% had prior training and 29% had good understanding of ADHD.

Engleman, T. (2024) conducted a research study on topic 'The effectiveness of applied behavioral analysis on individuals with attention deficit/hyperactivity disorder'. The purpose of this paper is to examine the effectiveness of ABA to treat symptoms of ADHD for individuals who are 6-17 years of age using a structured literature review. Several public databases were searched for articles describing the use of ABA interventions to treat symptoms of ADHD. In total, fourteen articles were found that described the use of ABA to treat symptoms of ADHD.

Objectives of the Study

1. To discuss the major problems faced by autistic children.
2. To know the challenges faced by children with ADHD.
3. To study about the Applied Behavioral Analysis (ABA) approach to support children with special needs.
4. To provide valuable insights into ABA therapy in supporting children affected with ASD and ADHD.

Research Methodology

This study was conducted by using an open-ended, self-made questionnaire to get an interview from the teachers of a private institution named by Pannajhill Autism Welfare Society (Barasat, Kolkata, West Bengal-700125) using a qualitative approach method. Data collection techniques using observation and interviews

focusing on the problems faced by disabled children present in the institution. Then, data were analyzed using the thematic analysis method. This qualitative research was done to study an in-depth investigation of teachers' experiences and strategies in handling students with ASD and ADHD. It focuses on analyzing and understanding of Applied behavior analysis (ABA) therapy and its effectiveness in those children.

Result and Discussion

Responses from teachers on the whole based on four main themes: **a)** Major problems faced by autistic children, **b)** The Challenges Faced by Children with ADHD, **c)** The concept of Applied Behavioral Analysis (ABA) approach to support children with special needs (used resources, infrastructure and strategies), **d)** ABA therapy in supporting children affected with ASD and ADHD. In the following results section, each of the themes will be discussed in turn.

a) The Major Problems Faced by Autistic Children

From teachers' perspective, autistic children face major problems including difficulties with social interaction, communication barriers, poor focus, sensory sensitivities like overstimulation in noisy classrooms and sometimes anxiety, emotional dysregulation. Students struggle in understanding non-verbal cues like body language, voice tones etc. These difficulties affect the ability to interact with others, especially with the people of their own age. They feel problem to initiate and maintain friendship, often feel neglected or rejected by peers.

Autistic students experience sensory sensitivities that affect their ability to cope with classroom environment. When a child exposed to bright lights, loud noises, strong smells etc. those make overwhelming and disruptive for them. They struggle with executive functions such as planning, organizing, keeping consistent attention, initiating or finishing any task, which makes challenging for them to keep up with academic demands.

Some student struggle in managing emotions and physical energy, leading to excessive fidgeting, restlessness and an inability to sit still during tasks. Children with autism majorly shows delays in language development. They feel trouble in following class routines, instructions, directions and comprehending information. They show restrictive, repetitive behaviours like counting from one to five repeatedly amid a conversation that is not related to numbers or repeating words someone just had said.

A significant problem teacher often face is lack of adequate resources, materials, fundings and lack trained educators. They feel unsupported to adapt teaching methods without collaborative support from specialists and administrators.

b) The Challenges Faced by Children with ADHD

From the interviews with teachers, it is known that some of the teachers' perceptions and experiences related to problems that emerge as a result of the symptoms of ADHD have an impact on ADHD students themselves, on teachers, and the surrounding environment. Students struggle to focus on lessons, complete assignments, or listen to instructions, especially multi-step ones. They feel difficult in keeping track of materials, homework, and deadlines, which leads to incomplete or disorganized work and may not finish assignments or tests due to difficulties with focus, organization, and time management. Every student with ADHD is different. Some need help paying attention and managing distractions. Some need help staying organized. Others need help getting started with their work, or finishing work they start. Some students with ADHD have trouble staying seated or working calmly.

ADHD symptoms can be mild, moderate or severe and symptoms usually start before age 12. In some children, they seen as early as 3 years of age and occurs more often in boys than in girls. Behaviors seems different in boys and girls; like boys show more hyperactive actions and girls tend to quietly not pay attention. Children become impulsive when they are affected by ADHD. They act without thinking, interrupt others, blurt out answers, and make rash decisions. They find it difficult to have social interaction or engage in any activities

requiring social gathering due to their communication issues and impulsive nature. Few students with ADHD also have learning disabilities like dyslexia, dyscalculia, dysgraphia etc. The combination of problems caused by having ADHD and learning disorders make it hard for a child to succeed in school. Properly diagnosing each disorder is an important part of getting the right kind of help for the child.

c) Applied Behavioral Analysis (ABA) Approach to Support Children with Special Needs

Applied behavioral analysis, or ABA, is a method of teaching children with autism and pervasive developmental disorders. It is based on the premise that appropriate behaviors including speech, academics and life skills; can be taught using scientific principles. ABA assumes that children are more likely to repeat behaviors or responses that are rewarded (or "reinforced"), and they are less likely to continue behaviors that are not rewarded. Eventually, the reinforcement is reduced so that the child can learn without constant rewards. The evolution of ABA therapy is deeply rooted in the principles of behaviorism, with significant scientific milestones occurring primarily in the 20th century. The foundation was laid by early behaviorists like Ivan Pavlov and B.F. Skinner. Pavlov's experiments with classical conditioning demonstrated how environmental stimuli could produce learned responses, shaping the understanding of associative learning. Later, Skinner expanded these ideas through operant conditioning, emphasizing how behaviours are influenced by their consequences—reinforcements and punishments. He developed the concept of the three-term contingency, which describes the relationship between antecedents, behaviours, and consequences, providing a systematic way to analyse and modify behaviour.

The formal development of ABA as a distinct discipline began in the 1960s through the work of Dr. O. Ivar Lovaas. His pioneering research applied Skinner's principles to teach children with autism. Initially characterized by highly structured, adult-led interventions. ABA gradually shifted toward more naturalistic, child-centered approaches like Naturalistic Developmental Behavioural Interventions (NDBIs)- which focus on child choice, motivation, and generalization.

Scientific validation of ABA's effectiveness grew through numerous studies. ABA therapy's primary purpose is to support children with autism spectrum disorder (ASD) in their developmental journey by enhancing various aspects of their functioning. This therapeutic approach employs a comprehensive framework that utilizes seven key principles, commonly referred to as the dimensions of ABA, to create individualized learning experiences. ABA helps children to acquire new skills, reduce maladaptive behaviors, and increase their independence. ABA has these seven dimensions i.e. applied, conceptually systematic, analytical, behavioural, effective, generalized, and technological; are presented in Fig. 1.

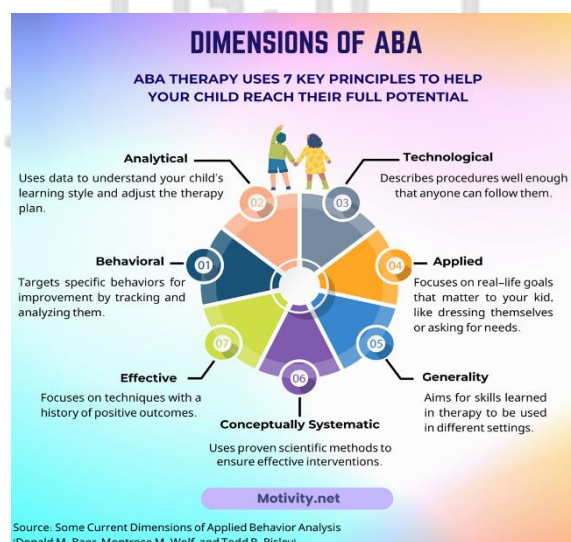


Fig. 1: Dimensions of ABA

Several studies within the field of ABA have continuously demonstrated and proven its effectiveness in improving socially significant behaviors and prioritizing meaningful outcomes with a variety of strategies. The principles of ABA have been demonstrated to be effective in changing important behaviors in organizational contexts, schools, home or other settings.

d) ABA Therapy in Support of Children Affected with ASD And ADHD

ABA approach for autistic children: Over the last few decades, ABA has grown into a broad group of approaches and techniques designed majorly to help children with autism. As stated above, ABA therapy is effective for autistic children because it uses reinforcement to increase helpful behaviors like communication and academics, and decrease problem behaviors. From teachers' perspective, it provides structured teaching methods such as breaking down complex tasks into smaller steps, using visual supports like schedules to improve understanding, and promoting independence by gradually reducing prompts. Teachers use visual supports like visual class routines or schedules, timers, stories to provide structure, aid transitions, and help students understand expectations. The picture exchange, communication cards, visual routines are made using pictures or words in the classrooms. Using consistent routines help students feel secure and manage transitions smoothly. Visual prompts guide a student and then gradually decrease the level of assistance to foster independence.



Fig. 2 and 3: Teachers are presenting visual prompt cards and class schedules.
(Pannajhill Autism Welfare Society, Kolkata-700125)

ABA strategies like focusing on attention and memory, help students improve their ability to focus on lessons, follow instructions, and complete academic tasks. Sometimes, teachers use a system where students can earn prizes, which can be exchanged for small privileges in encouraging positive behaviors, leading to a more constructive and interactive learning atmosphere.

ABA approach for children with ADHD: From teachers' perspective ABA can also be effective for children with ADHD as it uses specific strategies to improve behaviour, create more positive classroom environment and support academic success. ABA is a treatment of choice majorly for ASD, Whereas the effectiveness of ABA for another common neurodevelopmental disorder ADHD is less well known. Understanding the effectiveness of ABA for ADHD is more important for teachers, especially for those working with students who have a comorbid diagnosis of ASD and ADHD.

Teachers report seeing improvements in symptoms like hyperactivity, impulsiveness and inattention in class. Similarly, like ASD teachers apply ABA principles like positive reinforcement, breaking down assignments, using visual supports to improve students' organization, social skills, and ability to follow instructions. ABA can lead to students exhibiting more appropriate behaviors, such as turn-taking, active listening and engaging in conversations. In this school assistive devices, visual aids and technologies are also present to remove barriers in learning, making education more inclusive. ABA is most effective when combined with other treatments, creating

a multi-modal approach. Vocational work skills, cocurricular activities, games, yoga treatments etc. are organised here to help students in learning hand-on-skills for building independence and enhancing social, communication activity.



Fig. 4 and 5: Students are brushing teeth, toasting bread using visual prompt cards.

Fig. 6: Students in painting class. (Pannajhill Autism Welfare Society, Kolkata-700125)

In ABA strategies collaboration is the key to be most effective, as it needs to be implemented consistently across different environments. This requires close collaboration with the child's parents, teachers, therapists and caregivers to understand the motivation behind behaviors and teach more adaptive and functional alternatives.

Conclusion

So, from the literature review and result observation of this work it can be conclude that, ABA program is efficacious in improving daily living skills, enhancing ASD and ADHD affected children's performances in school. It shows significant improvements for autistic children, while research is less extensive for children with attention deficit hyperactivity disorder (ADHD). Early long-term and comprehensive ABA interventions show positive and medium to large effects on language development and social functioning for autistic children. ABA is widely cited as an evidence-based practice with many studies demonstrating its efficacy and role as a standard intervention approach. Lack of information on the effectiveness of ABA for ADHD has the potential to negatively impact children with ADHD because they potentially can miss being exposed to a treatment that has the potential to be effective. This along with the increasing need for effective treatments make finding effective alternative treatments for individuals (like ABA) even more important. While this study provides valuable insights, it is important to acknowledge certain limitations that impact the generalizability, such as cost, time commitment, age barriers and structural constraints of environment. Some individuals report that ABA can lead to a 'robotic' or overly clinical approach, which focuses only on behaviour that may not be socially or emotionally enriching. Finally, to broaden the generalizability and impact of the ABA program, the research suggests expanding its application to other diverse populations by increasing the sample size and for more extended duration.

Reference

- Ashour, J. T., & Bagadood, N. H. (2022). Teachers' perspectives on using applied behavior analysis strategies to students with autism spectrum disorder in Saudi Arabia: barriers and solutions. *International Journal of Educational Sciences*, 37(3), 25-34. [10.31901/24566322.2022/37.1-3.1227](https://doi.org/10.31901/24566322.2022/37.1-3.1227)
- Baer, D. M., Wolf, M. M., & Risley, T.R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1(1), 91-97. <https://doi.org/10.1901/jaba.1968.1-91>

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- Butchart, M., Long, J. J., Brown, M., Mcmillan, A., Bain, J., & Karatzias, T. (2017). Autism and visual impairment: a review of the literature. *Journal of autism and developmental disorders*, 4(2), 118-131. <https://doi.org/10.1007/s40489-016-0101-1>
- Engleman, T. (2024). *The Effectiveness of Applied Behavioral Analysis on Individuals with Attention Deficit/Hyperactivity Disorder* [Master's thesis, Youngstown State University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=ysu1714435694423644
- Krishnamurthy, V. (2008). A clinical experience of autism in India. *Journal of Developmental and Behavioral Paediatrics*, 29(4), 331-333. <https://doi.org/10.1097/dbp.0b013e3181829f1f>
- Maskey, M., Warnell, F., Parr, J. R., Couteur, A. L., & McConachie, H. (2013). Emotional and behavioural problems in children with autism spectrum disorder. *Journal of Autism Developmental Disorders*, 43, 851-859. <https://doi.org/10.1007/s10803-012-1622-9>
- Shetty, A., & Rai, B. S. (2014). Awareness and knowledge of attention deficit hyperactivity disorders among primary school teachers. *International Journal of Current Pharmaceutical Review and Research*, 6(9), 30-36
- Silva, J. F. (2025). The application of applied behavior analysis (ABA) in the development of inclusive products for children with autism. *Revista Científica Sistemática*, 15(5), 325-334. <https://doi.org/10.56238/rcsv15n5-004>
- Thabet, A. A., Ghamdi, H. A., Abdullah, T. A., Elhelou, M. W., & Vostanis, P. (2010). Attention deficit–hyperactivity symptoms among palestinian children. *Eastern Mediterranean Health Journal*, 16(5), 505-510. <https://pubmed.ncbi.nlm.nih.gov/20799549/>
- Yu, Q., Li, E., Li, L., & Liang, W. (2020). Efficacy of interventions based on applied behavior analysis for autism spectrum disorder: a meta-analysis. *Psychiatry Investigation*, 17(5), 432-443. <https://doi.org/10.30773/pi.2019.0229>

