

CHAPTER FOURTEEN

IDENTIFICATION AND MANAGEMENT OF AUTISM IN CHILDREN THROUGH APPLIED BEHAVIOUR ANALYSIS (ABA) THERAPY

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Introduction

The term Autism, now referred to as [Autism Spectrum Disorder](#) (ASD). This condition is considered a spectrum because the condition is different for every autistic person. WebMD (2021) describes autism as a complicated condition that includes problems with communication and behavior which can involve a wide range of symptoms and skills. Autism can be a minor problem or a disability that needs full-time care in a special facility. More children are diagnosed with autism nowadays than before. But the latest numbers could be higher because of changes in how it's diagnosed, not because more children have a disorder. Autistic children have trouble with communication. They have trouble of understanding what other people think and feel. This makes it hard for them to express themselves, either with words or through gestures, facial expressions, and touch. Children with autism might have problems with learning. Their skills might develop unevenly, for instance, these children may have issues with communication but are unusually good at art, [music](#), math, or memory. Because of this, they might do especially well on tests of analysis or problem-solving.

University of Louisville (2016) see autism as a complex neurological condition that involves a wide range of abilities and differences. Many scientists do not know the causes of this disorder. They explain how autism can impact a child's normal functioning at different levels, from mild to severe. Children with severe autism usually portray looks that set them apart from other children, but they may communicate, interact, behave, and learn in ways that are different from most people. Children with autism have a unique thinking and learning ability and it varies from gifted to significantly challenged. There is **a range of therapy or techniques used to help children with autism learn new skills**. These include Applied Behaviour Therapy, [Discrete Trial Training](#) and [incidental teaching](#). Programs might also use everyday interactions as opportunities for children to learn.

Autism, or Autism Spectrum Disorder (ASD) is a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and non-verbal communication. According to the Centers for Disease Control (2022), autism affects more than 1 in 44 children in the United States today but in Nigeria, there is no estimate number affected. Autism is most influenced by a combination of

genetic and environmental factors. Because autism is a spectrum disorder, each child with autism has a distinct set of strengths and challenges. The ways in which children with autism learn, think and problem-solve can range from highly skilled to severely challenged. Some children with autism may require significant support in their daily lives, while others may need less support and, in some cases, live entirely independently. Several factors may influence the development of autism, and it is often accompanied by sensory sensitivities and medical issues such as gastrointestinal (GI) disorders, seizures or sleep disorders, as well as mental health challenges such as anxiety, depression and attention issues.

[Signs of autism](#) usually appear by age 2 or 3. Some associated development delays can appear even earlier, and often, it can be diagnosed as early as 18 months. Research shows that early intervention leads to positive outcomes later in life for people with autism. In 2013, the American Psychiatric Association merged four distinct autism diagnoses into one umbrella [diagnosis of autism spectrum disorder](#) (ASD). They included autistic disorder, childhood disintegrative disorder, [pervasive developmental disorder-not otherwise specified](#) (PDD-NOS) and [Asperger syndrome](#). Many researchers thought these types were once in separate conditions. Now, they fall under the range of autism spectrum disorders. WebMD (2021) mentions the types of autism in Children which include:

1. [Asperger's syndrome](#): These children don't have a problem with language; in fact, they tend to score average or above-average range on intelligence tests. But they have social problems and a narrow scope of interests.
2. **Autistic disorder**: This is what most people think of when they hear the word "autism." It refers to problems with social interactions, communication, and play in children younger than 3 years.
3. **Childhood disintegrative disorder**: These children have typical development for at least 2 years and then lose some or most of their communication and social skills.
4. [Pervasive developmental disorder](#) (PDD or atypical autism): Doctor might use this term if the child has some autistic behavior, like delays in social and communications skills, but doesn't fit into another category.

The thesis statement of this chapter will discuss identification and causes of autism, the management of autism through Applied Behaviour Analysis (ABA) Therapy, rationale for Applied Behaviour Analysis (ABA) Therapy and the implication of Autism in Learning and Development of Children. Suggestions would be made as the chapter concludes the discussion.

Identification and Causes of Autism

University of Louisville (2016) identified the followings in children with autism:

1. Children with autism have trouble talking, making strange sounds or not talk at all.

2. They flap their hands, spin, or rock
3. They sit quietly and not look at others
4. They play or behave differently than other friends
5. They are very active or quiet and love to spend time alone
6. They have trouble looking directly at other people
7. They do or say the same thing over and over again

Parents of children with autism find post-secondary education an insurmountable hill to climb despite their cognitive ability. Gaining admission without ever identifying their children as individuals with autism or Asperger Syndrome, these children go unnoticed by their educators or trainers until their sensory, social, learning styles and organizational challenges combined with fatigue cause them to fail. Many children affected with autism never finish school. Many things need to be done to assist these children who have the potentials to graduate from all level of their education, but often fail because their needs are unidentified and their talents are under-supported.

In the study of WebMD (2021) revealed that autism is more common in boys than in girls in the United States. It can happen in children of any race, ethnicity, or social background. Family income, lifestyle, or educational level does not affect a child's risk of autism. WebMD explained further that some risk factors which may result to autism runs in families. So, certain combinations of genes may increase a child's risk; child with an older parent has a higher risk of autism; exposure to chemicals, alcohol, anti-seizure medications and drugs by pregnant women.

Centre for Disease Control and Prevention [CDC] (2022) reported that Diagnosing autism is difficult because no medical test (blood test) is used to diagnose the disorder. It added that doctors may look at the child's developmental history and behavior to make a diagnosis. Some doctors may diagnose autism when the child is 18 months of age or younger (Lord, Risi, DiLavore, Shulman, Thurm, and Pickles, 2006). Hyman, Levey, and Myers (2020) asserted that early diagnose of children with autism is important to make sure children receive the services and supports they need to reach their full potential. They mentioned the several steps in diagnosing an autistic child which are developmental screening, developmental monitoring and developmental diagnosis.

Developmental monitoring is an active and the ongoing process of watching a child grow and encouraging conversations between parents and teachers about a child's skills and abilities. Developmental monitoring involves observation how the child grows and whether the child meets the typical developmental milestones, or skills that most children reach by a certain age, in playing, learning, speaking, behaving, and moving. During diagnosis, the doctor will do developmental monitoring through play and asking the child questions to check if the child is developing or not CDC, (2022). Also, through developmental monitoring, the doctor may ask about the family history.

Developmental screening takes a closer look at how the child is developing. CDC, (2022) added that developmental screening is more formal than developmental

monitoring. It is a regular part of some well-child visits even if there is not a known concern. Some doctors recommend developmental screening for all children between the age of 9- 30months. They added that children with autism may have developmental screening at the age of 18- 24 months.

Management of Autism through Applied Behaviour Analysis (ABA) Therapy

According to MayoClinic (2022), no cure exists for autism. The goal of therapy is to maximize your child's ability to function by reducing autism spectrum disorder symptoms and supporting development and learning. Early intervention during the preschool years can help children with autism learn critical social, communication, functional and behavioral skills. There are some home-based school treatments and interventions for autism spectrum disorder that can be overwhelming, and the child's needs may change over time. Many programs address the range of social, language and behavioural difficulties associated with autism. Some programmes focus on reducing problem behaviours and teaching new skills. Other programmes focus on teaching children how to act in social situations or communicate better with others.

Applied Behaviour Analysis (ABA) can help children learn new skills and generalize these skills to multiple situations through a reward-based motivation system. The Applied Behaviour Analysis (ABA) approach and its techniques can help children with autism improve their social skills, self-care skills, communication skills, play skills and ability to manage their own behaviour. It can also help to reduce behaviour like inattention, aggression and screaming in children. Various programmes based on Applied Behaviour Analysis (ABA) therapy generally involve: assessing a child's current skills and difficulties, setting goals and objectives, designing and implementing a programme that teaches the 'target' skill, measuring the 'target' skill to see whether the programme is working, and evaluating the programme itself and making changes as needed.

Applied Behaviour Analysis (ABA) is a therapy that uses constructive behavioural strategies to help children with autism. This approach differs on how to treat autism. Behaviour analysts emphasize that the science of behaviour should be considered a natural science as opposed to a social science. Teachers focus on observable connections between behaviour and environments, as opposed to speculation (Regis College, 2021). He added that variety of methods are used to teach which includes; pivotal response training, discrete trial training, and verbal behaviour intervention (VBI) to name a few, depending on the needs of the individual. For instance, a therapist may take a VBI-based approach if the primary goal is to teach verbal skills. If the primary goal is to prepare an individual for independent living, the therapist may use an approach that promotes self-management.

Applied Behaviour Analysis involves many techniques for understanding and changing behavior. ABA is a flexible treatment:

- It can be adapted to meet the needs of each unique person

- It can be provided in many different locations – at home, at school, and in the community
- It teaches skills that are useful in everyday life
- It can involve one-to-one teaching or group instruction

Positive Reinforcement

Positive reinforcement is one of the main strategies used in Applied Behaviour Analysis (ABA). When a behaviour is followed by something that is valued (a reward), a person is more likely to repeat that behavior. Over time, this encourages positive behaviour change. First, the therapist identifies a goal behavior. Each time the person uses the behaviour or skill successfully, they get a reward. The reward is meaningful to the individual – examples include praise, a toy or book, watching a video, access to playground or other location, and more.

Antecedent, Behaviour, Consequence

Understanding **antecedents** (what happens before a behaviour occurs) and **consequences** (what happens after the behaviour) is another important part of any Applied Behaviour Analysis (ABA) program. The following three steps – the “**A-B-Cs**” ; help teacher teach and understand behaviour:

1. An **antecedent**: this is what occurs right before the target behavior. It can be verbal, such as a command or request. It can also be physical, such a toy or object, or a light, sound, or something else in the environment. An antecedent may come from the environment, from another person, or be internal (such as a thought or feeling).
2. A resulting **behaviour**: this is the person’s response or lack of response to the antecedent. It can be an action, a verbal response, or something else.
3. A **consequence**: this is what comes directly after the behavior. It can include positive reinforcement of the desired behavior, or no reaction for incorrect/inappropriate responses.

Looking at **A-B-Cs** helps us understand:

1. Why a behavior may be happening
2. How different consequences could affect whether the behavior is likely to happen again

EXAMPLE:

- x. **Antecedent**: The teacher says “It’s time to clean up your toys” at the end of the day.
- xi. **Behavior**: The student yells “no!”
- xii. **Consequence**: The teacher removes the toys and says “Okay, toys are all done.”

How could Applied Behaviour Analysis (ABA) help the student learn a more appropriate behaviour in this situation?

- **Antecedent**: The teacher says “time to clean up” at the end of the day.
- **Behavior**: The student is reminded to ask, “Can I have 5 more minutes?”

- **Consequence:** The teacher says, "Of course teacher can have 5 more minutes!"

With continued practice, the student will be able to replace the inappropriate behaviour with one that is more helpful. This is an easier way for the student to satisfy the child's needs.

Rationale For Applied Behaviour Analysis(ABA) Therapy

Good Applied Behaviour Analysis (ABA) programmes for autism are not "one size fits all." Applied Behaviour Analysis (ABA) should not be viewed as a canned set of drills. Rather, each program is written to meet the needs of the individual learner. The goal of any Applied Behaviour Analysis (ABA) program is to help each person work on skills that will help them become more independent and successful in the short term as well as in the future. A qualified and trained behaviour analyst (BCBA) designs and directly oversees the program. They customize the ABA programme to each learner's skills, needs, interests, preferences and family situation. The BCBA will start by doing a detailed assessment of each person's skills and preferences. They will use this to write specific treatment goals. Family goals and preferences may be included, too.

Treatment goals are written based on the age and ability level of the person with ASD. Goals can include many different skill areas, such as:

- Communication and language
- Social skills
- Self-care (such as showering and toileting)
- Play and leisure
- Motor skills
- Learning and academic skills

WebMD (2021) opined that the instruction plan breaks down each of these skills into small, concrete steps. The therapist teaches each step one by one, from simple (e.g. imitating single sounds) to more complex (e.g. carrying on a conversation). The BCBA and therapists measure progress by collecting data in each therapy session. Data helps them to monitor the person's progress toward goals on an ongoing basis. The behaviour analyst regularly meets with family members and program staff to review information about progress. They can then plan ahead and adjust teaching plans and goals as needed.

The instructor uses a variety of Applied Behaviour Analysis (ABA) procedures. Some are directed by the instructor and others are directed by the person with autism. Parents, family members and caregivers receive training so they can support learning and skill practice throughout the day. The person with autism will have many opportunities to learn and practice skills each day. This can happen in both planned and naturally occurring situations. For instance, someone learning to greet others by saying "hello" may get the chance to practice this skill in the classroom with their teacher (planned) and on the playground at recess (naturally occurring). The learner receives an abundance of positive reinforcement

for demonstrating useful skills and socially appropriate behaviors. The emphasis is on positive social interactions and enjoyable learning. The learner receives no reinforcement for behaviours that pose harm or prevent learning.

Applied Behaviour Analysis (ABA) is very important to children with autism, Barbera (2020) highlighted the followings as the importance of Applied Behaviour Analysis (ABA) Therapy:

1. It increases social abilities (communication and learning skills) of children with autism
2. It implements maintenance behaviours like self-control and self-regulation
3. It teaches them to transfer learned behaviors to new environments
4. It modifies the learning environment to challenge children with autism in certain scenarios
5. It reduces negative behaviours like self-harm

The Implication of Autism in Learning and Development of Children

1. Autism Spectrum Disorder is a developmental disability that generally appears before the age of 3. Conditions such as Asperger Syndrome and Pervasive Developmental Disorders (PDD) fall within the autistic spectrum, and can cover a wide range of different needs. In general, children with ASD develop more slowly than others their age, and sometimes, do not learn common skills in the same way or order. Since autism can have an effect on mental and physical development, it can then cause wider repercussions on a child's learning both at school and home. Therefore, it is essential that children with autism are offered, and can access, extra help in particular development and learning areas.
2. Autism is often unique to each individual person. However here are some common developmental traits that can have a big impact on learning:
3. Difficulties with tuning into other people's speech and behaviour in the same way as typically developing children. You may find that the child takes longer, or does not feel able, to respond to their names, make eye contact, smile at others, or wave goodbye. Autistic children may only know when, or how to do this, if they are reminded at a particular moment.
4. An inability to speak or difficulty in using language. Research has found that around 40% of children with autism do not speak at all. This means that autistic people may find beginning or maintaining relationships very challenging, and, by being unable to verbally communicate, find socialising in big groups even harder.
5. Difficulties with maintaining joint attention. This is where a child with autism cannot always focus on something for long, and so are unable to make links between it and the wider world, people or situations. Issues with joint attention can therefore make learning social skills like taking turns, interpreting facial expressions or keeping to the topic of a conversation, very difficult and confusing.

6. Misunderstanding other peoples' perspectives. Although this ability typically develops as a child reaches the ages of 3 and 5, those with autism can take much longer to develop this essential social skill. They may not understand that it is possible or ok that those around them have different beliefs than themselves. They may also struggle with anticipating and reading the behaviour of other people, unable to see how their own actions can have a big impact on them. This can then exasperate the child's difficulties with their own emotional regulation, creating a cycle of confusion and frustration.
7. It is also well documented that co-morbid medical conditions are common in a person with ASD, and these can affect mental and physical development in many different ways. Conditions include allergies, asthma, epilepsy, digestive disorders, feeding disorders, sleeping disorders, sensory integration dysfunction, and cognitive impairments. However, this varies from person to person, and these health issues may appear suddenly and then later disappear as the child grows up.
8. When you consider the developmental difficulties discussed above, they can all have a knock-on effect against the learning of a child with autism.
9. If a child has difficulties tuning into someone else's speech or behaviour, then they may be unable to access lessons due to the way a teacher verbally delivers them, or finds social cues confusing during group work. This can affect all sorts of different lessons across the board, and be a familiar issue that the child has to work with and overcome throughout their school life. Also, by tuning out, a child may be overwhelmed by the sensory aspects of the surrounding classroom or learning space, and so connect a learning situation with anxiety, struggle and unease.
10. A lack of communication skills, or difficulties with learning language, can stop a child from making concrete connections, asking questions, showing their teacher what they do and do not understand, and learning from their peers. This also feeds into the issue with misunderstanding perspectives, making it harder for students with autism to understand different cultures, how they do not know something when someone else in the class does, and why characters in stories act the way they do after big events occur.
11. The lack of joint attention means that a child with autism could struggle with orientating themselves throughout the school day. During lessons, break times and changeable events, they may find it difficult to focus, pay attention, deal with transitions, organise their time and equipment, maintain an up to date understanding of what is expected of them, and control their emotions and frustrations. In terms of learning, these built up anxieties can affect concentration and resilience.
12. Co-morbid medical conditions can knock the confidence out of a student with autism because they may feel alienated from their peers, and so less willing or self-assured to ask and answer questions. On top of this, they may have to miss school at times, or leave the classroom regularly to support their individual

condition. As a result, progress in the classroom may be reduced because the child has to keep catching up on missed work.

Conclusion

This chapter discusses identification and management of autism in children. A wealth of research spanning half a century has painted a clearer picture of autism in many children. This has helped a lot of researchers to gain deeper understanding of the physiology, neurology and cognitive psychology of those with autism and allows researchers to see the clear implication for treatment. The chapter explains different techniques under Applied Behaviour Analysis (ABA) therapy for managing autism in children. The chapter highlights the implications of autism as a condition in learning and development of children. The chapter concluded that through intensive experiments, observations and deep longing to connect children with autism with others children, management like Applied Behaviour Analysis (ABA Therapy can be help in managing various behaviour exhibited by children.

Suggestions

The following suggestions were made for this paper;

1. Teachers should use activity schedules for children with autism to increase independence
2. Teachers should recognize speech delayed from autism in children and identify the signs to delayed speech in children
3. Teachers should attend workshops and seminars always
4. Parents should start making a difference in their children on signs of autism through free training online
5. Nigeria should borrow a leaf from America on provision of estimated number of children with autism through data.

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