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## Applied Behavior Analysis (ABA) Program as a Model for Children with Autism Spectrum Disorder

برنامج تحليل السلوك التطبيقي "ABA" كنموذج على أطفال طيف التوحد

**Madi Hala Yassamine<sup>1</sup>, Mechtar Hocine<sup>2</sup>**

<sup>1</sup> PHD student, University of May 8, 1945 – Guelma, Laboratory of Philosophy, Humanities, Social Sciences, Media and Communication Problems, Health and Society research group – SOPHILAB madi.hala-yassamine@univ-guelma.dz

<sup>2</sup> P, University of May 8, 1945 – Guelma, Laboratory of Philosophy, Humanities, Social Sciences, Media and Communication Problems, Health and Society research group –SOPHILAB, mechtar.hocine@univ-guelma.dz

ماضي هالة ياسمين<sup>1</sup>، مشطر حسين<sup>2</sup>

<sup>1</sup> طالبة دكتوراه، جامعة 8 ماي 1945 قالمة، كلية العلوم الإنسانية والاجتماعية، قسم علم النفس، مخبر الفلسفة

والعلوم الإنسانية والاجتماعية ومشكلات الاعلام والاتصال فريق الصحة والمجتمع (SOPHILAB)

madi.hala-yassamine@univ-guelma.dz

<sup>2</sup> بروفيسور، جامعة 8 ماي 1945 قالمة، كلية العلوم الإنسانية والاجتماعية، قسم علم النفس، مخبر الفلسفة

والعلوم الإنسانية والاجتماعية ومشكلات الاعلام والاتصال فريق الصحة والمجتمع (SOPHILAB)،

mechtar.hocine@univ-guelma.dz

**Corresponding author:** Madi Hala Yassamine: madi.hala-yassamine@univ-guelma.dz

**Abstract:**

Due to the continuous increase in the prevalence of autism spectrum disorder, many scientists have made it arrogate early care programs for infected children, including the Applied Behavior Analysis Program.

This study aims to shed light on the Applied Behavior Analysis Program and its various characteristics, steps and techniques.

**Keywords:** Analysis Applied behavior, autism spectrum disorder, behavior modification.

**الملخص:**

نظرا لتزايد المستمر في نسبة انتشار الإضطراب طيف التوحد جعل العديد من العلماء يسطرون برامج للتكفل المبكر بالأطفال المصابين منهم برنامج تحليل السلوك التطبيقي .  
تهدف هذه الدراسة إلى تسليط الضوء على برنامج تحليل السلوك التطبيقي و مختلف خصائصه و خطواته و فنياته.  
الكلمات المفتاحية : اضطراب طيف التوحد، تحليل السلوك التطبيقي، تعديل السلوك.

## 1. INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by difficulties in social communication, reciprocal social interaction, and repetitive behavior patterns. It manifests in early childhood, making early diagnosis and intervention crucial. Various attempts using behavioral or educational programs aim to train and modify children's behavior by teaching positive behavior patterns, skills, interaction, and improving movement, which reduces their stereotypical and accompanying behaviors. Among these programs is Applied Behavior Analysis (ABA), considered one of the most effective and widely recognized methods by professionals. It is one of the most important global programs for modifying the behavior of children with disabilities in general and those with ASD specifically. ABA focuses on helping individuals with ASD develop communication and social interaction skills, visual communication skills, as well as cognitive and perceptual skills. The goal is to integrate them into regular schools and community settings properly, achieving self-independence, communication, pre-academic skills, and reducing maladaptive behaviors.

## 2. Autism Spectrum Disorder:

### Definition of Autism Spectrum Disorder:

Leo Kanner was the first to describe this disorder, naming it Infantile Autism. Kanner noted the characteristics of eleven children who had an unknown syndrome, which included the inability to form social relationships, delayed speech acquisition, non-communicative use of speech, echolalia, pronoun reversal, repetitive and stereotyped

play activities, poor imagination, good memory, and a normal physical appearance.

It is a group of neurodevelopmental disorders causing disturbances in social, communicative, and emotional skills, as well as exhibiting strange behavior patterns and limited interests. The symptoms of autism vary from child to child, leading to classifications ranging from severe to mild autism spectrum.

## 3. Applied Behavior Analysis (ABA):

### Definition of ABA:

ABA is the science that relies on the behavioral theory of learning, previously known as behavior modification. It involves analyzing the relationship between behavior and the surrounding environment and then working to influence these behaviors, whether the goal is to develop new behaviors in the individual (behavior shaping) or to modify existing undesirable behaviors.

Jamal Muhammad Al-Khatib defines ABA as the science that seeks to understand individual behavior by studying how environmental, biological, and pharmacological factors influence human and animal behavior.

It is a scientific approach to understanding behavior shaped by the environment and is a comprehensive program based on the principles of behavior analysis. It was developed to support individuals with ASD or other behavioral or developmental disorders by teaching new skills and behaviors, maintaining desired behaviors, and reducing and managing negative behaviors.

ABA is one of the most important and latest behavioral programs applied with autistic children, initiated by Ivar Lovaas, who first applied this program to children with autism. Lovaas's method involves a prolonged program to train skills in these children, particularly social skills, with structured, logical, and intensive training based on the behavioral theory of conditioning by Skinner, aiming to control autistic behaviors by controlling stimuli associated with their actions, relying on direct teaching and intensive reinforcement.

#### **4. Characteristics of ABA:**

- Analytic: Data related to behavior (before, during, and after intervention) is collected to analyze behavior changes post-intervention and determine whether the intervention is responsible for the change or if other conditions caused it.

- Behavioral: Targets observable and measurable behaviors that benefit individuals, measured in their natural environment. For example, if crying occurs at home, it is observed and measured at home rather than just being asked about.

- Applied: Aims to improve the individual's life by selecting important behavioral goals that will positively impact them and those around them, such as teaching communication skills and daily life skills like using the bathroom and eating independently.

- Technological: Intervention procedures are described clearly and accurately for specialists to understand and apply if desired.

- Conceptually Systematic: Various scientifically proven methods are used to develop desired behaviors or reduce

undesirable ones, avoiding harmful and ineffective intervention methods.

- Effective: The intervention is considered effective if there is a significant difference post-intervention compared to pre-intervention. Minor or negligible differences indicate ineffective application.

- Generality: Maintains and continues behavior post-intervention, applying it in different environments and with different individuals, such as maintaining handwashing skills after the intervention and performing the skill in various settings.

#### **4. Goals of ABA:**

- Teaching self-care skills like dressing.

- Teaching skills needed for integration, such as obeying the teacher, sitting and standing in line, and participating in activities.

- Strengthening fine and gross motor skills like writing, running, and climbing.

- Developing verbal and non-verbal communication skills.

- Enhancing social communication abilities.

- Teaching basic academic skills in reading, writing, and arithmetic to help integrate the child into school.

#### **5. How ABA Supports Individuals:**

ABA procedures support individuals through six ways:

- Increasing behaviors: Procedures like reinforcement increase task-related behavior or social interactions.

- Teaching new skills: Methodical guidance and reinforcement procedures help teach

functional life skills, communication skills, or social skills.

- Maintaining behaviors: Teaching self-control and self-monitoring procedures to maintain the generalization of job-related social skills.
- Generalizing or transferring behavior: From one situation or response to another, like completing assignments in a resource room to doing them in regular classrooms.
- Controlling or narrowing the conditions where interfering behaviors occur: Adjusting the learning environment.
- Reducing interfering behaviors: Such as self-injury or stereotypy in children with autism.

#### **6. ABA Techniques for Children with Autism:**

- Reinforcement: Using frequent reinforcements is fundamental in the behavioral program, providing the child with immediate rewards after each successful attempt to execute the required step. This includes food reinforcers, material reinforcers, activity reinforcers, and social reinforcers.
- Shaping: This involves analyzing the behavior into several sub-tasks and reinforcing them. Reinforcing sub-steps increases their repetition until the final behavior is achieved. For example, tooth brushing involves sub-skills like holding the brush, controlling the pressure on the toothpaste, etc.
- Chaining: This involves dividing the general behavior into several stages. For example, handwashing for an autistic child involves steps like turning on the tap,

putting hands under the water, grabbing the soap, etc., until the final step of turning off the tap.

- Modeling: This involves the model performing a specific behavior to illustrate and assist another person who is asked to observe and imitate. The observer acquires new behaviors not previously present, and observation can reduce or increase existing behaviors. Types of modeling include live or direct modeling, filmed modeling, and participatory modeling. Behavior changes result from observing and imitating the model.

- Prompting: This involves using additional discriminative stimuli temporarily to increase the likelihood of the correct response. It is a technique to encourage the individual to exhibit the desired behavior quickly instead of waiting for it to occur spontaneously.

#### **7. Key Pillars of Lovaas' ABA Program:**

- Creating a Positive Relationship Between the Child and the Therapist: This involves establishing communication between the autistic child and the therapist, facilitating the therapeutic process through play or other means before starting the therapeutic process. Without this relationship, achieving the therapeutic process is impossible.
- ABC Behavioral Model: Behavior consists of three parts, and this model is simple and used to understand and analyze problematic behavior through three main elements:
  - What happens right before the behavior (Antecedent Factors)
  - What happens during the behavior (The Behavior)

- What happens right after the behavior (Consequence Factors)

- Continuous Measurement: A key component of Lovaas' program is continuous measurement of the child's progress in each skill through consistent recording of the child's successful and unsuccessful attempts.

- Learning and Training in the Child's Natural Environment and the Role of the Family in the Program: Lovaas emphasized the importance of training in the child's natural environment. From his experiments with children to test the effectiveness of ABA, he found that children lost their learned skills after returning to their natural environments if training was done in closed settings. Including the family in these programs is crucial as they are the primary caregivers and first teachers, responsible for the child's continued education and organizing the natural environment.

## 8. CONCLUSION :

In conclusion, ABA procedures are based on objective principles and are among the most effective, widely recognized, and applied by professionals. ABA is a significant global program for modifying the behavior of children with disabilities in general and autistic children in particular. Children in centers have acquired various skills in language learning and social skills, in addition to improving their learning abilities. It has also proven effective in dealing with children suffering from accompanying behaviors of many developmental disorders, such as autism and ADHD. Parents can learn to perform ABA and work on it themselves with their autistic child.

## References:

1. Al-Khatib, Jamal (2008). Behavior Modification, 1st Edition, Amman, Jordan: Wael Publishing House.
2. Al-Zureikat, Ibrahim Abdullah (2018). Applied Behavior Analysis: Principles and Procedures in Behavior Modification, Jordan: Dar Al-Fikr.
3. Adel Abdullah Muhammad (2011). Introduction to Autism Disorder and Behavioral and Emotional Disorders, 1st Edition, Al-Rushd Publishing House, Amman, Jordan.
4. Adnan Ahmed Al-Fasoos (Abu Asif) (2011). The Simple Reference in Behavior Modification Methods, 1st Edition.
5. Aifa Asia (2013-2012). The Effectiveness of the Lovaas Program in Improving Communication Skills in Autistic Children, Master's Thesis in Cognitive and Linguistic Psychology, University of Algiers 2.
6. Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd Ed.). Pearson