

# AUTISM AND ABA

The use of Applied Behavioral Analysis  
in Teaching and Behavior Planning for  
Children with Autism Spectrum Disorder

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## WHAT IS AUTISM?

- A neurological disorder affecting communication and social abilities
- Characterized by restrictive and stereotyped patterns of behavior including:
  - 1) preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal in intensity or focus.

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2) inflexible adherence to specific non-functional routines.

3) stereotyped and/or repetitive movements

4) persistent preoccupation with parts of objects

- Autism is a spectrum disorder. It is now referred to as ASD

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## COMMON SIGNS OF AUTISM

- Lack of eye contact
- Delayed language development
- Self injurious behaviors
- Repetitive movements (i.e. rocking, flapping, flicking)
- Repetition of words and phrases rather than functional communication
- Perseverations

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## WHAT IS ABA?

- Dates back to BF Skinner who performed animal experiments showing that concrete rewards (i.e. food) lead to behavior changes
- Dr. Lovaas took Skinner's theory and applied it to teaching children with autism in his landmark study in the 1970s

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## HOW HAS ABA EVOLVED?

- The use of Applied Verbal Behavior (AVB).
- AVB focuses on the child's motivation to speak rather than simply teaching the child a word

Currently, both types of programming are used to teach and program for children with autism depending on the skill and the child's rate of learning

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## WHY ABA FOR CHILDREN WITH ASD

- ABA provides a systematic way of teaching language since experiential learning is difficult for this population
- ABA provides a systematic way of decreasing maladaptive behavior(s) and increasing appropriate behavior(s). This population does not typically behave for the intrinsic joy it provides others in their environment.

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- It is the only scientifically proven methodology for teaching children with ASD

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# PRINCIPLES OF BEHAVIOR

- Reinforcement
- Punishment
- Establishing Operations
- Extinction Bursts

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# REINFORCEMENT

- Occurs with the presentation (positive reinforcement) or removal (negative reinforcement) of a stimulus that results in that behavior more likely to occur in the future
- Must occur IMMEDIATELY after the behavior to be considered reinforcement
- Examples

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# PUNISHMENT

- Occurs with the presentation (positive punishment) or removal (negative punishment) of a stimulus that results in that behavior less likely to occur in the future
- Must occur IMMEDIATELY after the behavior to be considered a punishment
- Examples

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# ESTABLISHING OPERATION

- A change in the environment which alters the effectiveness or "potency" of an object or event as a reinforcer or punisher
- Examples

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## EXTINCTION BURST

- An increase in behavior which occurs when that behavior is being extinguished
- Examples

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## SCHEDULES OF REINFORCEMENT

- Determining an appropriate schedule of reinforcement must be data driven
- Thinning or fading a schedule of reinforcement too quickly and not systematically will result in an increase in the behavior and an increase in the intensity of future extinction bursts

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## TEACHING TECHNIQUES UTILIZING PRINCIPLES OF ABA

- Prompting/Fading
- Shaping
- Chaining

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## EFFECTIVE PROMPTING AND FADING

- Types of prompts:
    - Physical
    - Gestural
    - Verbal
    - Positional
- Importance of appropriate fading of prompts and simultaneous/appropriate use of reinforcement so as not to lead to prompt dependence

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# SHAPING

- The systematic and differential reinforcement of successive approximations of a desired behavior
- Examples

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# CHAINING

- The way in which a sequential series of behaviors are linked together
- FORWARD CHAINING - Behaviors are linked together beginning with the first behavior in the sequence

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- BACKWARD CHAINING - Behaviors are linked together beginning with the last behavior in the sequence

- Examples

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# BEHAVIOR PLANNING

- STEP ONE - Should always be to conduct a functional behavioral assessment (FBA)
- STEP TWO - Develop a comprehensive behavior plan based on the results of a thorough FBA

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## FBA

- An FBA is a process for gathering information that can be used to maximize the effectiveness and efficiency of behavioral support

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## COMPONENTS OF AN FBA

- A clear description of problem behaviors  
Aggressive behavior: screaming, hitting, biting, and kicking others. Throwing materials off of desk.
- Identification of events, times, and situations that will predict the occurrence and non occurrence of the problem behaviors  
When given seat work in math class, Lisa exhibits tantrum behavior after 5-10 minutes directed towards the person who is working with her on the assignment.

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- Identification of consequences that maintain the problem behaviors

Lisa is taken to time out where she is able to sit and be by herself.

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- Summary statements that describe the behaviors, times they occur, and the outcomes or reinforcers of those behaviors  
When given a math assignment, Lisa will exhibit aggressive behavior after 5-10 minutes. These behaviors are maintained by the ability to take a time out from a difficult task.
- Collection of direct observation data that support summary statements.  
Data should reflect at least two weeks of behavior, unless the behavior is dangerous to the individual or others around him/her

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## WHY CONDUCT AN FBA?

- Having information about where, when, and why problem behaviors occur is essential in building effective/efficient behavioral support
- It is now a professional standard for the above reason

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## COMPONENTS OF AN EFFECTIVE BEHAVIOR PLAN

- Operational definition of problem behaviors
- Summary statements resulting from a functional assessment
- General approach for making problem behaviors irrelevant, inefficient, and ineffective (teaching and reinforcing appropriate replacement behaviors)
- Monitoring and evaluation plan

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## SAMPLE BEHAVIOR PLAN FOR LISA

### Problem behaviors:

Aggression: screaming, hitting, biting, and kicking others. Throwing materials off desk.

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### Functional assessment summary statements:

When given a math task, Lisa will exhibit aggression towards her aide within 5-10 minutes of being given the task. These behaviors are maintained by task avoidance which is reinforced by Lisa's being given time out. No clear setting events were identified - the behavior occurs across settings and providers. A competing behavior model was used to organize the support plan.

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## General approach:

Setting event strategies: none

Predictor strategies:

- 1) Have a "break" visual on Lisa's desk and allow her to request a break appropriately when needed.
- 2) Change Lisa's math assignments so that she has several small sets of work to complete. Let Lisa know up front exactly what will be expected of her.

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## Teaching strategies:

- 1) Conduct teaching sessions with Lisa throughout her day in various settings and with various providers which teach her and reinforce her for asking appropriately for a break.
- 2) Conduct teaching sessions with Lisa throughout her day in various settings and with various providers which teach her and reinforce her for asking appropriately for help.
- 3) Conduct teaching sessions with each staff member that will be working with Lisa to ensure consistency in the implementation of the behavior plan.

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## Consequence strategies:

- 1) Each time Lisa requests a break appropriately she will be able to take one. If she is in the middle of a task, she can take a 60 second break and must return to task. If she is at the end of a task, she may take 5 minutes to participate in a preferred activity.
- 2) Each time Lisa asks for help appropriately, the provider will say, "Lisa, I love how you asked me for help." The provider will then help Lisa with minimal prompting to help Lisa to be successful.

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3) Each time Lisa begins to engage in aggressive behavior, she will be hand over hand prompted to complete the task. She will then be prompted to ask appropriately for her break and will be given it upon appropriate requesting.

4) If Lisa's aggression presents a danger to herself or others, she must be restrained according to school regulations. She must immediately be brought back to task once she has calmed down.

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## Routines:

**Math assignments:** Math assignments typically have 30 problems on them. Present Lisa with 20 total problems with 5 problems on a page at a time. She can request help whenever she wants to. She can request a break and will be reinforced with one as described in consequence strategies. Upon completion of each 5 problems with no aggression, Lisa is given 5 minutes of a preferred activity.

**Tantrums:** See description of tantrums in "consequence strategies."

## Monitoring and Evaluation:

The ABC data collection form will be used to monitor the frequency of Lisa's aggressive behavior. The data will be reviewed by the teacher each morning prior to the start of class and weekly by the teacher and behavior specialist to determine whether changes in the plan are warranted. The teacher, behavior specialist, parent, and an administrator will review the results of the program formally within 3 months of its implementation.