USING APPLIED BEHAVIOR ANALYSIS (ABA) ACROSS MULTIPLE SETTINGS

POSITIVE BEHAVIORAL CONNECTIONS
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DISCLOSURE

I declare that neither I, or my immediate family, have a financial interest or other relationship with any manufacturer/s of a commercial product/s or service/s which may be discussed at the conference.
OVERVIEW

• Evolution of ABA
• Characteristics of ABA
• Application of ABA
The Behavior Analysis Certification Board (BACB) defines Behavior Analysis as the scientific study of principles of learning and behavior....

ABA is a systematic approach for influencing socially important behavior through the identification of reliably related environmental variables and the production of behavior change techniques that make use of those findings.
APPLICATIONS OF ABA

ABA has been used in:

- Organizations (Organizational Behavior Management/Performance Management) to address human performance issues and employee behaviors
- In-patient and out-patient treatment facilities and clinics to support patient outcomes
- Schools to support appropriate behavior
- In-home therapy programs
- Parent training programs
POPULATIONS TREATED USING ABA

- Children and adults with Autism
- Children and adults with other developmental disabilities
- Children with conduct disorder, ADHD and other behavior disorders
- Professionals in the work place
- Athletes
- Parents
BEHAVIORS TREATED WITH ABA

Some of the behaviors ABA has been used to treat:
- Employee performance
- Exercise adherence
- Language acquisition
- Positive parenting
- Self-help skills
- Sport performance
- Industrial safety
- Reduction of maladaptive behavior
- Compliance with medical procedures
- Gambling addiction
FUNDING SOURCE LIMITATIONS

• Research supports the use of ABA across the previously listed populations and behaviors
• Many funding sources limit and restrict the population they will pay for ABA to be implemented
• Private health insurance primarily will only approve ABA to be provided to children with Autism
THE EVOLUTION OF ABA

- ABA is the application of the science of behavior to real, everyday issues

- In the 50’s and 60’s researchers began to apply the basic research of the previous decades to humans in ‘real life’ situations (e.g., improving functioning of patients at an inpatient mental health facility, Ayllon & Michael, 1959)
Most early research focused on reducing maladaptive behaviors and has often been called “Behavior Modification.” Since then significant research has also been done on the effectiveness of the principles of ABA to learning and skill acquisition particularly for children with autism.
BACKGROUND OF FUNCTIONAL ASSESSMENT

• In 1982, Iwata published the landmark paper on experimental functional assessment as a way to assess and treat maladaptive behavior addressing the root causes of the behavior.

• This is largely viewed as the shift from “Behavior Modification” to “Applied Behavior Analysis”.

• The first application of this process was with people with developmental disabilities and has since been applied to young children with challenging behavior and children with varying diagnoses such as ADHD and conduct disorder.

• In 1997 as a part of IDEA, school districts were required to conduct Functional Behavior Assessments (FBA) when children displayed persistent problematic behaviors in school.
ABA FOR SKILL ACQUISITION

• Lovaas was the first to document his application of ABA with children with autism in the 1960s’s which was later published in 1987. His work focused on skill acquisition and behavior reduction.

If they can't learn the way we teach, we teach the way they learn.

— Ole Ivar Lovaas —
SETTINGS WHERE ABA IS IMPLEMENTED

• Anywhere behavior occurs (EVERYWHERE)
• Misconception that ABA only occurs at table with flashcards – where did this misconception come from?
  • Initial and discrete teaching must occur in a setting where the instructor has control of the environment
  • Good ABA programs differentiate if control is only available at a table setting for these initial steps or if more natural environment settings can be effective
  • A ‘one size fits all’ or a program that doesn’t include a plan for less restrictive settings is indicative of poorly designed and poorly supervised ABA program
CHARACTERISTICS OF ABA

1. Emphasis on *function* of behavior in applied settings – both positive behaviors (e.g., language, social) and excesses (e.g., aggression, stereotypy)
2. Emphasis on *observable* and *measurable* behavior
3. Emphasis on *repeated* measures of behavior

Lund, C.J. (2013). *Brief ABA overview*. Retrieved from https://www.youtube.com/watch?v=1t1wNt_a1al
CHARACTERISTICS OF ABA

4. Treatment methods are defined precisely to promote fidelity. The program is the treatment, not the implementer.

5. Socially significant effects (size and importance of behavior change)

6. We are accountable – if a child is not learning, WE are not teaching correctly
### Behaviors Typically Targeted in ABA Programs for Children

#### Skill Acquisition
- Self help
- Leisure/play
- Language
- Social
- Adaptive behavior
- Academic/cognitive
- Personal safety skills

#### Behavior Reduction
- Aggression
- SIB
- Elopement
- Ritualistic behaviors
- Stereotypy
- Property destruction
## Current Applications of ABA for Children with Autism

### Focused Programs
- Targeted intervention for behavior reduction (e.g., aggression, SIB, disruptive behavior, etc)
- **AND/OR**
- Skill acquisition for specific areas of deficit (e.g., social skills, adaptive skills including toileting and feeding)

### Comprehensive Programs
- Aimed at producing changes that result in global measure of functioning (e.g., IQ, adaptive skills, and social functioning)
- EIBI – Early intensive behavioral intervention when done with young children
CURRENT APPLICATIONS

**Focused**
- Settings
  - Home
  - Clinic
  - Community
  - Residential
  - Hospital/In-patient
- All ages
- Generally 10-25 hours of direct intervention per week

**Comprehensive**
- Settings
  - Home
  - Clinic
  - Community
  - Residential
  - Hospital/In-patient
- All ages
- Generally 30-40 hours of direct intervention per week
COMPONENTS OF A GOOD ABA PROGRAM

• Comprehensive assessment – initial and ongoing
• Deliberate, frequent, well designed opportunities to learn and practice new skills (up to 50-100 times per hour)
• Plan for generalization
  • Settings
  • People
  • Materials
• Monitor maintenance of skills
• Treatment decisions and program based on repeated data measures
BACB – AUTISM TREATMENT GUIDELINES

- Tiered treatment model with BCBA and RBTs
- **Role of BCBA**
  - Oversee the program by monitoring progress, setting goals, adjusting treatment protocols
  - Train and consult caregivers
  - Report progress toward treatment goals
  - Develop and oversee transition/discharge plan
- **Role of RBT (Registered Behavioral Technician)**
  - Deliver treatment protocols

ABA PROCEDURES EMPLOYED

- Reinforcement and schedules of reinforcement
- Differential reinforcement
- Shaping/Chaining
- Behavioral Momentum
- Prompting/Fading
- Discrete Trial Teaching
- Incidental Teaching/NET (natural environment teaching)
- Behavioral Skills Training
- Extinction
- Functional Communication Training
- Generalization and maintenance procedures
- Self-Management
WHAT DOES ABA LOOK LIKE IN VARIOUS SETTINGS?

• Characteristics and principles remain the same regardless of location
  • Crossing Street
  • Compliance
  • Toilet Training
  • Language
  • Socialization
  • Adaptive living skills
ABA IS A RECOGNIZED AS AN EFFECTIVE TREATMENT FOR AUTISM BY

- National Research Council
- American Academy of Pediatrics
- Centers for Disease Control (CDC)
- American Academy of Child and Adolescent Psychiatry
- US Surgeon General
- Mayo Clinic
- National Institute of Mental Health (NIMH)
- National Institute of Child Health and Human Development
RESEARCH SUPPORTING EIBI

• In 2009 and 2010 5 meta-analyses were published on the effectiveness of EIBI*
  • 4 or 5 reported that EIBI produced large gains in IQ and/or adaptive behaviors
  • The 5th analysis is widely critiqued for methodological flaws confounding their results
• In 2010 Eldevik, et al., concluded the following from their meta-analysis**
  • Effect sizes were moderate to large and comparable to those found for medical and psychological treatments for major depression, OCD, and bulimia
  • ABA interventions from 36 or more hours per week for more than 2 years was necessary to produce reliable gains on measure of intelligence and adaptive skills

CHARACTERISTICS OF AN EIBI PROGRAM

- **Age** – EIBI programs usually begin with young children (under 2 when possible) with a starting age of up to 7 years old.
- **Intensity** – EIBI programs typically range from 30-40 hours per week for children over 3 and 25-30 hours for children under 3. 50-100 opportunities to respond and learn each hour.
- **Length of treatment** – Treatment generally lasts 2-3 years depending on the need and age of child at onset.
- **Skills addressed** – EIBI programs are designed to be comprehensive and target skills including language, pre-academic, social, and adaptive
THANK YOU

Contact us with any follow up questions:

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