Applied Behavior Analysis
&
Autism Spectrum Disorder

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Objectives of Training

- Overview of Autism Spectrum Disorder (ASD)

- Characteristics of ASD

- ASD's impact on cognitive processing

- Overview of ABA

- The Environment & Behavior

Autism Spectrum Disorder (ASD)

- Neuro- Developmental Disorder
  - Impacts social communication, cognitive abilities and behaviors
- Diagnosed by observing behavior and developmental milestones
- Risk Factors associated with ASD
  - Biological
  - Genetic
  - Environmental
- Approximately 1 in 59 individuals have been identified with ASD
- ASD is about 4.5 times more common among males
- Male (1:42) vs. Female (1:189)

Characteristics of ASD:
Social Communication & Social Interaction

- Social Emotional Reciprocity –
  - Lack ability to initiate interactions or attempts are awkward
  - Difficulty with back-and-forth conversations (often one-sided)

- Developing, Maintaining & Understanding Relationships –
  - No or low interest in other people
  - Difficulties changing behavior to meet social contexts.

- Non-verbal Communication –
  - Abnormal eye contact, posture, facial expressions, tone of voice
  - Inability to understand non-verbal signals/gestures from other people.

Characteristics of ASD:
Restrictive & Repetitive Behavior/Activities/Interest

- Extreme desire for routines/patterns and resistance to changes-
    - Gets dressed the same way
    - Lines up items in room or play area in a specific way
    - Greets others in a ritualistic way
- Repetitive speech or movements-
    - Repeats phrases, words, noises or motor movements
    - Shakes fingers, rocking, fidgets with items in a specific way
- Intense and restrictive interests-
    - Only plays and talks about Among Us no other hobbies
    - Attached or preoccupied with unusual objects (fans, septic systems)
- Difficulty integrating sensory information-
    - Strong seeking or avoiding behavior to specific sensory input

How Individuals with ASD process info.

- ASD is a neurodevelopmental disorder-
  - Impacts how they receive, process and store information
- Concrete Thinkers
  - Visual processing is easier than Auditory-
    - Takes longer to process auditory input and to act / respond
    - Visuals are concrete – can see it
  - Struggles with Literal Thinking / Figurative speech
-       " I'm feeling down", "I'll catch you later" "I'm Dying!"
- Deficits in Self- Awareness
  - How their actions impact others or may have consequences.
  - My actions have impacts on others
- Difficulty with Change and Shifting Attention
  - Note: ASD and ADHD can co-exist and present similarly

How Individuals with ASD process info.

- Differences in Executive Functioning
  - Often inflexible in their way of thinking
  - Difficulties with organization
  - Self regulation deficits
- Struggle with some areas of Logic
  - Black and White- No grey areas
  - Overgeneralization
    - Magnification or Minimization
- Theory of Mind-
  - Knowing your mind is separated and unique from other minds.
  - Understanding the thoughts, emotions or intent of others.
- Challenges with Observational Learning

Applied Behavior Analysis

- The systemic and direct application of scientific principles of human behavior and learning.

- The purpose is to predict, influence and modify certain behaviors.
  - Teach or increase desired behaviors
  - Reduce or eliminate undesired behaviors

- Analyze the environmental factors that influence behaviors, learning and motivation.

- Works on the Philosophy that ALL behavior happens for a reason

Applied Behavior Analysis (7 principles)

- Applied - A hands on science- direct intervention on individual
- Behavioral- Observable and measurable behaviors, clearly defined
- Analytic- Data collected and drives treatment decisions
- Technological- Specific and clearly describes procedures
- Conceptual Systematic- Done the same way every time (repetition)
- Effective – Intervention must work! (socially significant changes)
- Generalizable – Behaviors must generalize to other people, places, items

Common ABA Strategies

- Reinforcement – For the presence or lack of behaviors (Social/Tangible/Sensory)
- Visuals- Picture or Written Expectations
- Schedules – Routines provided for daily or specific tasks
- Timers – Time is an abstract concept- makes concrete and visual
- Functional Communication Training- Ask for presence or removal of stimuli
- Discrete Trials Training- Repeating the skill over and over again to learn
- Task Analysis – Multi-step skills broken down/ learn each step separately
- Modeling – Visually show the behavior expectation
- Prompting- Helping the individual emit the correct behavior
- Pivotal Response Training- Focus on an area of development (not a specific behavior such as self regulation, choice making)

Why ABA and ASD

- **Reinforcement** –Social Skill deficits
- **Visuals-** Cognitive Processing / Concrete thinking
- **Schedules** – Repetitive / Restrictive Characteristic
- **Timers** – Cognitive Processing / Concrete thinking
- **Functional Communication Training-** Social Communication Characteristics
- **Discrete Trials Training-** Cognitive Processing /Executive Functioning
- **Task Analysis** – Cognitive Processing Attending / Executive Functioning
- **Modeling** – Cognitive Processing - Working Memory/Concrete thinking
- **Prompting-** Cognitive Processing Attending / Visual
- **Pivotal Response Training**- Cognitive Processing/ Executive Functioning

ABA Beyond Skill Building

- ABA is designed to work with the individual neurological differences

- Neurodiversity Effectiveness

- Versatility of strategies to all areas of life

- Easy to learn and implement

- Life long benefits of skill learning