REDUCING PROBLEM BEHAVIORS WITHIN THE HOME & COMMUNITY

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Presented by:
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AGENDA

• Overview of ABA
• Ineffective Methods to Reduce Problem Behavior
• Understanding Functions of Behavior
• The Role of Reinforcement
• Protocols to Reduce Problem Behavior
OVERVIEW OF APPLIED BEHAVIOR ANALYSIS (ABA)

Applied behavior analysis (ABA) is a science based approach to learning that is has been empirically validated to be effective in autism treatment.

ABA is a discipline devoted to the understanding and improvement of human behavior.

ABA focuses on objectively defined, observable behaviors of social significance.
DEFINING CHARACTERISTICS OF ABA

• **APPLIED:** Behaviors should have social significance, meaning, they must have an immediate importance to the subject or society.

• **BEHAVIOR:** Not any behavior will do; the target behavior must be the behavior in need of improvement and the behavior must be able to be measured.

• **ANALYTIC:** The experimenter must be able to control the occurrence and non-occurrence of the behavior.
ELEMENTS OF ABA

- Procedures are based upon the principles of learning and the experimental analysis of behavior
- Behavior does not just occur randomly; behavior is lawful and predictable. When we understand the science and variables in effect, we can predict and control behavior
- Data-based decision making
  - Decisions are not made upon individual opinion or preferences, they are made upon the objective data collected

ABA has received empirical support as an effective treatment for autism.
WHAT DOES NOT WORK?

• Before presenting methods to reduce problem behavior in children with autism and related disabilities it is worthwhile to discuss commonly recommended methods that have little evidence or negative evidence.

• 2009 The State of Maine published the report below which comments on effective treatments for persons with autism
The State of Maine Dept. of Health along with the Dept. of Education published a report outlining interventions that were commonly used in Autism treatment.

Interventions were evaluated according to the available evidence and further grouped into 5 different categories:

- Established Evidence
- Promising Evidence
- Preliminary Evidence
- Studied and No Evidence or Effect
- Insufficient Evidence
- Evidence of Harm
Gluten-Casein Free Diet | INSUFFICIENT EVIDENCE

Elimination of gluten and casein from diets are believed by some to prevent symptoms of ASD linked to opioid activity that is triggered by the peptides in these substances (Millward, Ferriter, Calver, & Connell-Jones, 2008). A recent high-quality clinical trial of a gluten/casein free diet did not detect any significant differences in behavior or other symptoms of ASD (Harrison, et al., 2006), while another study showed positive results but had some concerning methodological flaws (Knivsberg, Reichelt, Hoien, & Nodland, 2003). A recent Cochrane review concluded that the evidence for these diets is poor and more research is needed and the Committee echoes this finding (Millward, et al., 2008). A large clinical trial of gluten- and casein-free diets is currently underway.

Sensory Integration Therapy | INSUFFICIENT EVIDENCE

Sensory Integration Therapy (SIT) aims to improve the functional behavior of children with ASD by addressing sensory integration dysfunction, which is believed to be prevalent in people with ASD (Leong & Carter, 2008). It is thought that people with ASD have underlying impairments in sensory processing i.e., they have difficulty integrating the sensory input continuously received from the environment in the form of touch, movement, sounds, and sensation. The discomfort that results from the inability to manage an over- or under-stimulating environment is believed to inhibit the child’s ability to regulate his or her level of arousal (Baranek, 2002) thereby contributing to behavioral issues such as agitation and aggression. SIT is delivered with the goal of improving the sensory processing pathways so that learning and functional ability can grow.

Based on the studies it reviewed, the Committee concludes there is no scientific evidence at this time that SIT has long-term impact on the core symptoms of ASD. These conclusions are consistent with recently published reviews (Baranek, 2002; Dawson & Watling, 2000; Leong & Carter, 2008). However, many parents and people with ASD report that sensory interventions have an immediate effect and enable their child to achieve better self-regulation. The results of this review should not negate the use of sensory interventions as immediate coping strategies by individuals who find them helpful since there is no apparent risk of harm.
Auditory Integration Training | INSUFFICIENT EVIDENCE

In addition to general sensory processing difficulties, children with ASD are hypothesized to have abnormal responses to auditory stimuli due to sensitivity or insensitivity to certain frequencies of sound (Berard, 1993). Auditory Integration Training (AIT) was developed as a method of retraining a child’s auditory pathways to tolerate these frequencies. However, the exact theory of why and how AIT works is yet to be confirmed. Despite this lack of clarity, AIT is frequently marketed to families with anecdotal reports of significant improvements in behavior (Mudford, et al., 2000). Children receiving AIT typically listen to 10 hours of digitally modified music over special headphones over twice per day half-hour sessions. A device filters out the high and low peak frequencies to which the child may be oversensitive (Dawson & Watling, 2000).

Five studies of AIT qualified for review. All were group studies, most with small samples of 9-10 children, but one study had a much larger sample of 80 children (Bettison, 1996). Most of the studies had significant methodological flaws, although two were rated with adequate research report strength. However, all of the studies but one found that AIT had no impact on autistic behavior. Bettison (1996) measured long-term outcomes following AIT for 12 months and found significant improvement in verbal and performance IQ scores; however, the methodology of the study makes its results highly questionable (Sinha, Silove, Wheeler, & Williams, 2004). High-quality controlled studies are needed to determine if there is indeed any merit to AIT’s claims.
RESULTS

• **Applied Behavior Analysis:**
  • For Behavior Reduction
  • For Teaching Communication
  • For Teaching Social Skills
  • For Early Intensive Behavioral Intervention

• Sensory Integration Therapy  \[\rightarrow\] Insufficient Evidence
• Gluten-Casein Free Diets  \[\rightarrow\] Insufficient Evidence
• Omega-3 Fatty Acid Supplements  \[\rightarrow\] Insufficient Evidence
• Vitamin B6/Magnesium Supplements  \[\rightarrow\] Insufficient Evidence
• Intravenous Chelation  \[\rightarrow\] Evidence of Harm
PURPOSE OF THIS WORKSHOP

• The purpose of this workshop is not to provide an overview of analog functional assessment methods but instead to describe a user friendly and effective descriptive method of assessment that includes direct measures of problem behavior and evoking antecedents and maintaining consequences.

• The majority of this workshop will then focus on implementation of treatments for the commonly identified socially mediated and automatic (sensory) functions of problem behavior in children with autism and related disabilities.

• I will detail the treatments for mainly socially mediated problem behavior but also automatically reinforced behavior that is not self injurious since analysis of these responses is beyond the scope of this workshop.
FUNCTIONS OF BEHAVIOR
FUNCTIONAL ASSESSMENT

• A set of procedures used to identify the cause of a maladaptive behavior and reduce it through teaching replacement behaviors instead of suppressing it through punishment.
• The term functional refers to the causes of behavior.
• The body of empirical and scientific literature which supports these methods is found in the field of Applied Behavior Analysis.
FUNCTIONAL ASSESSMENT

• Skinner’s research and the research of his followers stressed the importance of identifying the environmental events which were functionally related to behavior.
FUNCTIONAL ASSESSMENT

• Within functional assessment methodology the causes are sought in the immediate environment and the learning history of the individual.

• Skinner suggested that maladaptive as well as adaptive behaviors showed the functional relationships related to antecedents and consequences.
FUNCTIONAL ASSESSMENT

- The outcome of the assessment is an analysis of the way the person learned the behavior and how it is presently supported or maintained in the present learning environment.
- Functional Assessment does not emphasize a search for a diagnosis or classification of symptoms according to psychodynamic processes as found in the DSM-5.
FUNCTIONAL ASSESSMENT

• Instead, the purpose of the assessment is to classify the maladaptive behavior by its function (cause) and then select treatments or interventions which are effective in reducing behavior in that functional category.

• Consequently, treatments or interventions are classified by functional categories and not by form of the maladaptive behavior.
WHY IS FUNCTIONAL ASSESSMENT VALUABLE TO TEACHERS, EDUCATORS AND PARENTS?

• For many parents and educators we may choose interventions or treatments based upon the behavior (form) instead of function.

• As a result, some recommended interventions actually strengthen the maladaptive behavior instead of reducing it.

• This situation can make school districts and their personnel vulnerable to successful legal, administrative and ethical challenges.
FUNCTIONS OF BEHAVIOR

- What is the **reason** the behavior occurred?
- What is the pay-off?
- What does the person get?
- What does the person avoid?
- How has the person learned this behavior?

- Why is it important for us to know the reason?
FUNCTIONS OF BEHAVIOR

The functional categories or response classes of behavior are listed below. Under the function is a brief description of reinforcers that select and maintain behaviors within each functional category.

**Socially Mediated Positive Reinforcement (SMPR)**
Access to items and activities act as reinforcer Attention acts as reinforcer

**Socially Mediated Negative Reinforcement (SMNR)**
Removal of stimulus acts as reinforcer

**Automatic Positive Reinforcement**
Behaviors produce stimulation that acts as a reinforcer

**Automatic Negative Reinforcement**
Removal of some bodily stimulation acts as a reinforcer (Pain Reduction) Usually treated medically.
WHY DO STUDENTS ENGAGE IN PROBLEM BEHAVIOR?

Functions – Everyday Terms

• **Tangible/Attention**- they want something
• **Escape**- they do not want to do something
• **Sensory**- they like how something feels
• **Medical**- they do not like how something feels
FUNCTIONS OF BEHAVIOR

To get something

- Preferred task/item
- Teacher/Parent/Peer
- Sensory
  - Attention

To get away/avoid

- Task/Activity
- Teacher/Parent/Peer
- Sensory
FUNCTIONS OF BEHAVIOR

- To understand why the behavior is occurring
  - What are they getting from the behavior?
- To develop a behavior support plan
  - Work with school and home to plan together.
- To find an appropriate replacement behavior
  - What would be better to do instead?
- To find ways to reduce, minimize, avoid and tolerate the “triggers”
  - What can we do plan ahead before the behavior even happens?
- To plan effectively to change our response (consequences) to the behavior
  - How do we all change our response to the behavior
Problem behavior is LEARNED!

It means that there is a skill deficit…meaning, we need to teach the student some other behavior as a replacement to problem behavior.

The goal is to understand the reason, or function, so the teacher/family can make changes to reduce the likelihood students will engage in problem behavior and increase learning opportunities to teach new skills that will ultimately replace problem behavior.
HOW PROBLEM BEHAVIORS ARE LEARNED

• All behaviors have been learned through reinforcement...EVEN PROBLEM BEHAVIORS.

• Problem behavior may be a way a child communicates wants and needs.
• Some children gain access to attention, activities, tangible items following problem behaviors.
• Problem behaviors at times result in avoiding or escaping from undesirable activities (gym, math, class work, bus ride home etc.).
• Problem behavior can be learned even when reinforcement is not intentionally delivered.

***These are all examples of how problem behaviors can be reinforced.***
A student may engage in problem behavior when they want something:

- Toys
- Food
- Attention

Why?
Because in the past............
Problem behavior → getting access to these things when desired
A student may engage in problem behavior when they do not want to do something or want to delay doing something:

- Classroom work or Home Activities
  - Too difficult
  - Slow pace of instruction
  - Length of session
  - Errorless teaching
  - Lack of reinforcers

- Transitions- when asked to leave a preferred activity and go somewhere else

**WHY?**

Because in the past…

Problem behavior $\rightarrow$ escaping demands, avoiding transitions, keeping access to preferred items
FUNCTIONS OF BEHAVIOR

• One behavior can have multiple functions
  - Ex. Johnny hits at home to get out of doing a task and hits a peer at school to get teacher attention.

• Several behaviors can have the same function
  • Ex. Johnny uses multiple behaviors in order to get the teacher’s attention such as hitting, calling out and getting out of his seat.
  • Ex. Johnny cries, flops and screams to get moms attention at home.
PROTOCOLS TO REDUCE PROBLEM BEHAVIOR
**Definition:** When a student has access to something (or is engaged in an activity) and has to give it up (or stop doing it).

**Scenario Examples:**

Tim is doing a cooking activity in with the OT and the OT says, “time to clean-up and go back to class.” Tim has a aggressive episode of problem behavior where he hits the staff and others.

John is playing with the iPad and a peer, comes over and touched the iPad and his game is lost. John starts screaming.
Mona is in art class. Art class ends and it is time to transition to gym. Mona starts whining and pinching her aide.

David earns 5 minutes of the computer and then computer time is over and he has to return to his desk. David starts screaming, complaining, and asking for 5 more minutes.

Computer time is over, time to take a shower.
“INTERRUPTION/TRANSITION”
ANALYSIS AND PROCEDURE

STUDENT ACTIVITY INTERRUPTED
Asked to leave one activity and directed to another activity

STUDENT EMITS PROBLEM BEHAVIOR
(Screams, Flops, Bolts, Bites, Self-injury)

NO

Consequence Reaction:
EXT + DRA

If teacher/parent
REMOVES DEMAND
& STUDENT MAINTAINS
ACTIVITY

Problem Behavior KEEPS
Happening

YES

If teacher/parent
REMOVES PROMISE
& REMOVES ACTIVITY
& MAINTAINS DEMAND
& Several Responses After Transition----Reinforces

Problem Behavior STOPS Happening
& Student Transitions Easily

1. Offer a Promise Reinforcer PRIOR to Transition
2. Antecedent Prevention: MO manipulation
3. Student takes promise & transitions from activity
4. YES

Offer a Promise Reinforcer PRIOR to Transition

Antecedent Prevention: MO manipulation

Student takes promise & transitions from activity
INTERRUPTION/TRANSITION VIDEOS

Nicole Interruption-Transition
Nicole Promise
Jerry Lee- School Promise Procedure
Brent – Revised May 2007
STUDENT EMITS PROBLEM BEHAVIOR (Screams, Flops, Bolts, Bites, Self-injury)

If teacher/parent REMOVES or DELAYS DEMAND Or REMINDS STUDENT OF REINFORCER

- **NO**
  - Consequence Reaction: EXT + DRA
  - Problem Behavior KEEPS Happening

- **YES**
  - If teacher/parent MAINTAINS DEMAND (EXT) & REQUIRES SEVERAL APPROPRIATE RESPONSES & THEN REINFORCES
    - Problem Behavior STOPS Happening & Student Complies Easily

Antecedent Prevention: MO manipulation

1. Offers a promise reinforcer PRIOR to giving demand
2. Deliver Promise & Reinforce Compliance

Analyses and Procedures

If teacher/parent REMOVES or DELAYS DEMAND Or REMINDS STUDENT OF REINFORCER

- **NO**
  - Problem Behavior KEEPS Happening

- **YES**
  - If teacher/parent MAINTAINS DEMAND (EXT) & REQUIRES SEVERAL APPROPRIATE RESPONSES & THEN REINFORCES
    - Problem Behavior STOPS Happening & Student Complies Easily
Definition: saying no or in some other way blocking/denying access to something that is desired (e.g., moving it out of reach, physically blocking access to it)

Scenario Examples:
Timmy asks you for a ball. You tell him “no.” Timmy kicks you.

Jamie reaches for a water bottle and you pull it away from him. He screams and flops to the ground.
Marcos wants to go swimming in the middle of December. You tell him “it’s too cold to swim now.” Marcos spits at you.

Sally wants more time on the computer and the teacher tells him no. Sally hits you.

While walking down the hall Zaire tries to go into another classroom. You stand in the entranceway and hold the door shut. Zaire pinches you and tries to push you out of the way.
“TOLD NO/DENIED ACCESS”
Analysis and Procedure

STUDENT asks for something and is
TOLD NO

STUDENT EMITS PROBLEM BEHAVIOR
(Screams, Flops, Bolts, Bites, Self-injury)

1. 

Consequence Reaction:
EXT + DRA

1.

If teacher/parent
Gives student what
he/she wants
Negotiates
Offers other items
Attends to behavior

2.

If teacher/parent
Does not give student what
he/she wants
Does not offer and
alternative
&
Removes all attention for
problem behavior
(except to protect)

3.

Problem Behavior STOPS Happening
& Student Complies Easily

Problem Behavior KEEPS Happening

NO

3.

YES

Deliver Alternative & Reinforce
“Accepting behavior”

4.

Offers an alternative reinforcer
“No, but you can have this instead.”

Antecedent Prevention:
MO manipulation
TOLD NO/ACCESS DENIED VIDEOS

Bobby-Accepting NO, retrn to dmnds, rtrn to reinf
Bobby-Accepting No, Eliminating Prmse Reinfrcr
Anthony Mall
**Definition**: when problem behavior occurs as a way of requesting something that is desired – and the student could have what he wants if he had asked appropriately

**Scenario Examples**:
Bobby grabs a ball out of your hand instead of asking for it.

Luis points to a crayon and whines.
Marisa bolts to the sink/water fountain when she is thirsty.

Nicole screams, “Break,” when she has been working at the table for 25 minutes.

Sammy drops to the floor kicking and screaming, “I want candy,” when the teacher offers him a gummy candy.
“WANTS SOMETHING – CAN HAVE”
Analysis and Procedure

STUDENT wants something and can have it.

BUT STUDENT asks with problem behavior (Hits, creams, Flops, Bolts, Bites, Self-injury)

NO

Consequence Reaction: EXT + DRA

If teacher/parent
Gives student what he/she wants
Asks what he/she wants
Searches for what student wants

Problem Behavior KEEPS Happening

YES

If teacher/parent
Immediately withdraws all attention (except to protect)
Count procedure until 5-10 seconds of no problem behavior
Prompt correct mand and reinforce

Problem Behavior STOPS Happening & Student Mands Appropriately

1. Teach mands/requests frequently

2. Deliver items that student mands for appropriately

Antecedent Prevention: MO manipulation

3.

4.
WANTS SOMETHING – CAN HAVE (BUTS ASKS INAPPROPRIATELY) VIDEOS

Jack G Count and Mand

Rachel Count and Mand
Definition: when problem behavior occurs seemingly without reason and cannot be clearly categorized under any of the other common antecedents; this kind of problem behavior is often mistakenly thought to occur for medical reasons; behaviorally, this kind of problem behavior can be described as a non-specific way of requesting to “make my life better”

Scenario Examples:

Billy is watching a movie he likes and starts screaming.

John is playing with a puzzle that he selected and begins throwing the pieces.

Kathryn is standing on the playground and suddenly starts hitting herself.
STUDENT engages in problem behavior (Hits, creams, Flops, Bolts, Bites, Self-injury)

If teacher/parent asks what he/she wants
Searches for what student wants
Talks to student to discover reason for behavior

Problem Behavior KEEPS Happening

If teacher/parent asks what he/she wants
Searches for what student wants
Talks to student to discover reason for behavior

Problem Behavior STOPS Happening & Student Mands Appropriately

**“OUT OF THE BLUE”** Analysis and Procedure

“OUT OF THE BLUE”
(No obvious environmental stimulus (no demand) and it is not medical problem)

STUDENT engages in problem behavior (Hits, creams, Flops, Bolts, Bites, Self-injury)

Consequence Reaction: EXT + DRA

If teacher/parent asks what he/she wants
Searches for what student wants
Talks to student to discover reason for behavior

Problem Behavior KEEPS Happening

If teacher/parent
Immediately withdraws all attention (except to protect)
Count procedure until 5-10 seconds of no problem behavior BEFORE attending & Reinforce appropriate change in behavior

Problem Behavior STOPS Happening & Student Mands Appropriately

Antecedent Prevention:
MO manipulation

1. Teach mands/requests frequently
2. Deliver items that student mands for appropriately

4.
Katy first day
REM Ember:

- Be Prepared
  - Always have reinforcers with you in case you need them
- Be Preventative
  - Use preventative procedures to off-set the inclination for your child to engage in problem behavior (prompt or promise reinforcers)
- Be Patient
  - Changing behavior is not a quick fix!! But remember, it is the only treatment with strong evidence of its effectiveness.
QUESTIONS???

Thank you!

Carbone Clinic - USA