Behavior Basics for Children with Autism

Willow Hozella
PATTAN
Autism Initiative ABA Supports

Introduction

- There are few easy answers
- Each case is unique
- There are systematic approaches that are powerful and are evidence based
- Addressing problem behaviors involves careful attention to detail, teamwork, and persistence and patience

Introduction (continued)

- This is a basic session focused on behavior management for children with autism
- Basic principles that should have wide range of applicability
- This session will avoid being too technical although technical descriptions are necessary

Caveat!

- We do not have all the answers
- Basic principles guide how we intervene on problem behavior (parsimony)

Why this presentation was developed

- "Aggression has been found to be more common among individuals with ID than among those in the general population (Holden & Gitleson, 2006) with an added risk factor for aggression for those individuals with a dual diagnosis of ASD and ID (Hill & Furnis, 2006; McClintock, Hall, & Oliver, 2003)."

- "The rate at which individuals with ASD present with ID has been estimated at 70% (Fombonne, 1999), and within these populations aggression is one of the behaviors most likely to be identified for intervention (Didden, Duker, & Korzilius, 1997; Horner, Carr, Strain, Todd, & Reed, 2002)."

both from Brosnan & Healy, 2011

Studies Involving Functional Analysis

Hanley, Iwata & McCord, 2003

Topography	Number of Studies	Percentage of sample
Self-injury	179 (130)	64.6 (4.6)
Aggression	113 (46)	40.8 (1.6)
Disruption	53 (19)	19.1 (6.9)
Vocalizations	35 (16)	12.6 (5.8)
Property destruction	29 (2)	10.5 (0.7)
Stereotypy	25 (17)	9.0 (6.1)
Noncompliance	12 (1)	4.3 (0.3)
Tantrums	10 (1)	3.6 (0.3)
Elopement	8 (1)	2.9 (0.3)
Pica	7 (3)	2.5 (1.1)
Other	10 (0)	3.6 (0)

Common Forms of Aggression and Self Injury for Individuals with ASD

Aggression	Self Injury
1. hitting/slapping	1. head slapping/hitting
2. kicking	2. head banging
3. pinching	3. biting hand/other body parts
4. biting others	4 . self pinching
5. throwing items	5. jaw popping
6. spitting	6. eye poking/gouging
7. pushing	7. throwing self to floor/ "flopping"
8. head butting	8. ingesting in-edibles/pica
9. grabbing	9. ear pulling
10. hair pulling	10. chocking self/gagging self

Don’t blame the child

- Children (and adults!) do what they have learned to be effective
- We all do what “works” (makes things better for us)
- What works is determined by a relationship between what we do and how the environment responds

Don’t blame yourself

- There are many factors that effect behavior
- We do what we have been taught to do
- The environment does the teaching and we are part of the environment

Don’t blame yourself

Working to solve problems involves caring deeply enough to do something different

AND

Remaining calm enough to be objective

What is Behavior?

Behavior is what the person does

- Observable
- Measureable
- Actions/movement

Behavior: It's not just the tough stuff!

- Everything we do is behavior; it occurs continuously
  - Walking, jumping, eating, breathing
  - Thinking, feeling, sensing
  - Some behaviors are not easily observable

Behavior: It's not just the tough stuff!

- Behavior does not occur in a vacuum: we do things in an environment; behavior changes the environment
- Behavior may be hard to predict, but making it more predictable is always a good first step
- Empiric approach can make behavior predictable

It's all behavior

- "Good" or "Bad" or otherwise, it's just what a person does
- All behavior follows a few basic rules

The ABCs of behavior…

The ABCs

- Antecedent
- Behavior
- Consequence
- Observing what happens before and after a behavior allows prediction
  - If we can predict we can get some control!

ABCs: examples

Antecedent	Behavior	Consequence
• Something interesting happens	• Look in that direction	• Seeing the event
• Someone asks “name an animal with a mane.”	• One says “lion”	• The other person nods and says “yes, a lion has a mane”
• Driving and the traffic light turns red	• Depress brake pedal	• Car stops
• Spoon on table	• Reaching toward it	• Touching spoon

ABCs: examples

Antecedent	Behavior	Consequence
Demand is given	Child screams “no!”	Compliance delayed or demand removed
Child wants to wear dirty tutu to dance class	Child cries and whines	Dad says, “Okay, just this once.”
Demand is given	Child follows direction	Parent lets child watch the Descendants
Child wants s’mores	Child is prompted to ask for s’more	Child is given a s’more

Making Behavior More Predictable

- Requires observation of pattern of responses
- Across time and conditions
- Patterns are not always obvious
- Systematic observation keeps us honest
  - Count or measure behavior
  - Relate the behavior to observable events

Critical Components of Behavior Plans

- Reduce motivation for problem behavior
  - Provide access to reinforcement for appropriate behavior!
- Teach a skill that is appropriate and accomplishes the same thing
  - Teach an appropriate skill to access the reinforcement!
- Use extinction if problem behavior occurs
  - Make problem behavior ineffective and inefficient!

All three steps are based on "Function"

- Function = reinforcement
- Multiple functions occur
- Reinforcement: a consequence that increases the future probability of behavior
  - Both positive and negative reinforcement increase behavior
  - Not all consequences are reinforcement

ABCs of behavior

- Reinforcement makes the world go around
- It's a consequence but doesn't work on the current instance of behavior, only on future instances
- Reinforcement not always obvious, not always simple (environments are complex and multiple events can occur at any one time)
  - This is especially true for children with ASD across functional levels

Antecedent	Behavior	Consequence
Motivating Operation (MO) • Alters value (establish/abolish) • Evokes/Abates behavior	**Response** • What student does • Observable • Measurable	**Reinforcement** • Increases future probability of behavior – Positive – Negative – Socially Mediated – Automatic
Discriminative Stimulus(S^D) • Signals availability of reinforcement		**Punishment** • Decreases future probability of behavior **Schedule of Reinforcement** • Intermittent reinforcement • VR: Reinforce on average, strong and steady
Prompts • Procedural use of discriminative stimuli		**Extinction** • Reinforcement no longer happens • Behavior fades

Causes of behavior

- We behave to change our immediate world
- How things change as a result of what we do make it more or less likely that we will do the same thing in the future
- When things get better, we do what happened just before more often
- If things get worse, we do whatever we did just before less often

Functions

Function in Common Terms	Function in Technical Terms
Attention	Socially mediated positive reinforcement
Tangibles	Socially mediated positive reinforcement
Escape	Socially mediated negative reinforcement
Self stimulation	Automatic positive reinforcement
Pain attenuation	Automatic negative reinforcement

What to observe

- If the problem behavior prevents instruction; it is worth doing something about
- If the problem behavior will prevent the student from appropriate social interaction; it is worth doing something about
- If it is dangerous, something absolutely must be done

How to observe

- Count it: how often does it occur? When does it occur?
- What are we doing before problem behavior occurs? (alone; demand; told, “no,”)
- What do we do after problem behavior occurs? (ignore, react, give something, sooth)

Simple ways to count

- Clicker counter and graph
- Time sample
- Duration

Why count problem behavior?

- Data keeps us honest
- Anecdotal reports are unreliable
- Data tells us if we are being effective teachers
- Data should alter our teaching behavior

Variables that effect behavior

- Our physiology: genes, brain, body, hormones, etc.
- Our culture: what other people around us value and respond to
- Our own history of doing things and how things change as a result of what we do: this is our learning history
- None of these variables work in isolation

Of the three things

- Physiological variables may set the stage for certain behaviors to be more likely:
  - Most of us can't do much about physiology; medical issues should be addressed carefully by medical providers
- Culture changes at a relatively slow pace
  - Short of moving to and adopting a new culture, not much you can do about this

3 components of an effective plan

- Motivation
  - Alter the value of the reinforcement
- Teach alternative skill
  - Very doable in most cases
  - If you know what to teach and how to teach it
- Extinction: reduce effectiveness
  - May be a challenge and have secondary effects
  - Often absolutely necessary

Altering Motivation

- If we look at motivation as a part of the environment, we can alter motivation.

- Motivation:
  - Alters the value of a reinforcement (learned and unlearned)
  - Changes the frequency of behavior
  - *Establish! Evoke!*
  - *Abolish! Abate!*

Altering Motivation

- Contrive and capture
- Satiate or deprive
- A change in circumstances alters the value of another event: Conditioned Motivating Operation-Transitive; (CMO-T)
- Reduce the value of escape: the Conditioned Motivating Operation-Reflexive (CMO-R)
- CMO-Rs operate as warning signals
- *No work, no monkey!*

Reducing the CMO-R derived from Carbone, et al , 2010

- Pair with reinforcement
- Ease in demands
- Reduce response effort
- Errorless teaching
- Vary schedule of reinforcement
- Teach to fluency
- Mix and vary tasks
- Intersperse easy and hard tasks
- Pace of instruction
- Place off task responses on extinction

The role of setting events

- Diet, sleep, medication: can serve to alter motivation
- Seldom, in and of themselves, reduce problem behavior

A side note on working with medical providers

- Diet, psychopharmacological, and other medical treatments should be monitored by physicians AND
- Should be informed by measures of behavior (such as daily counts of how often behavior occurs) from school, home, and other settings
- Verbal reports are notoriously unreliable!
- Medical interventions should work in tandem with interventions to teach new behaviors

Enrich the Environment

- Engaged children have little reason to emit problem behavior
- Engagement in other activities may reduce MO to engage in problem behavior
- Study what children like
- Keep children busy

Teaching is the way to go!

- Teach a competing behavior
- Keep the student engaged
  (Who runs a workshop for idle hands?)
- Learning to appropriately ask for what you want
- Learn under the right conditions
  (I don't make eye contact because you hold preferred items next to your eyes)

Teaching is the way to go!

- Antecedent interventions: an ounce of prevention is worth a pound of cure
- Can't do something unless you know how
- Even if you do know how, you might not do it *(Enough practice? Playground dilemma)*
- No one sits in the fire very long (if things get worse, we try to escape)

General Ways to Improve Behavior

- Adults as signals that suggest possible outcomes (due to pairing with reinforcement)
  - Eye contact
  - Tone of voice
  - Plus some ideas, such as ”ready hands’ (to be detailed a little later)
- How to talk with children (or not talk as the case may be!)

How to talk with children

- Say what you want them to do. Be explicit!
- Do not call attention to problem behavior
- Talk more about things you want to see happen and less when problem behavior occurs
- Talk is cheap: be sure that you back up any statements
- Do not say things you are not going to back up! (Don't threaten)
- Too many demands lead to avoidance!
- Avoid denigrating, blaming child, whining
- Behavior specific praise and feedback
- Tone of voice

Learning

- Since we can change what goes on around the child, we can make behavior more or less likely.
- This is a critical variable!
- It allows us to control things that can make a difference
- It is not always easy or a quick fix!

Some things that may not work

- "Warnings" or advanced notice
  (Dentist appointment, why not a picture of a drill on your refrigerator?)

- Stating the rationale for the transition or direction
  (What skills do I need to understand why we are going to Grandma's house?)

Some things that may not work (continued)

- Labeling the problem behavior
  (Let's get back to talking about me.)

- "I" statements: "I don't like it when…"
  (I don't like traffic.)

- Stating why you think the behavior is occurring
  (*"you're doing this to be mean"; "you just do this to drive me crazy", etc.*)

Reasoning

- Only works with children who have verbal skills and then only if your reasons are backed by facts
  - Complex relations between words and events
  - "Stop being bad" circus example

- However: reasoning will be important for children and teens who can "reason" (verbally problem solve)
  - Involves rule governed behavior: must be backed up!
  - Explicit directions: state the contingencies that are in place
  - Peers more important than adults

  - Skill Streaming and other social skills

Are meltdowns the result of "sensory needs?"

- Attributing "meltdown" behavior (temper tantrums, property destruction, screaming, crying, "storming", etc.) to sensory function (automatic negative reinforcement) can be tricky territory
- A problem: everything is sensory
- Danger of reinforcing unwanted behaviors
- Simpler answers may be more likely:
  - want something
  - want to escape something
  - missing some skill set
- Sensory sensitivity may serve as a motivation: it alters the value of other reinforcement
- This is not to say that people with autism do not respond differently to various stimuli than most people

Good instruction

- Explicit
  - Structured enough to allow easy learning
  - Loose enough to allow flexible responding
- Build and plan for generalization
- Active responding
- Teaches skills for the real world

Good instruction (continued)

- Errorless Teaching
- Error Correction
- Coherent Skills Sequence
  - Assessment drives target selection
  - Mastered skills used to teach new skills
  - Simple to complex

Some skills to teach to reduce problem behavior?

- Use of "promise reinforcement"
- Mand
- Cooperation
- Ready hands
- Wait
- Give up reinforcement
- Interruption transition *(video)*
- Accepting "no"

INTERRUPTION TRANSITION

PROTOCOL TO ADDRESS PROBLEM BEHAVIOR

Step 3: What if problem behavior occurs?

- Use of extinction
- A conundrum: extinction effects
- Things can get worse before they get better

(video of redirection for hand biting)

Effective use of extinction

- Response Interruption and Redirection
- Time out
  - Count and mand
  - Duration of time out issue
  - Return to opportunity to access reinforcement
- Escape Extinction
  - Safety issues
  - Inadvertent problems
  - Reinforcing early in chain if needed

- Be careful to not be reinforced for ending problem behavior *(Remember reinforcement works both ways!)*

- Instructors usually feel good by ending problem behavior. But they may have reinforced the problem behavior

- Short term gain will make for long term pain (both for the student and the instructor).

There are exceptions, however.

Sometimes problem behavior is quite serious

- Self Injurious Behavior
- Aggression
- Property Destruction
- Elopement

Chapter 14 Regulatory Issues: A Brief Review

- Positive rather than negative (freedom from aversive and demeaning treatment). Positive reinforcement in PBSP.
- Research based practice
- Functional assessment
- Least intrusive requirement
- Restraints last resort (restraint= physical force and restraining free movement; except h/h and hold w/out force to calm, certain OT/PT devices, seat belts, safety harness)
- Restraints only used when clear and present danger and only when less intrusive measures fail
- Parental notice of restraint use; IEP w/in 10 days unless parent waives
- Only in IEP if certain conditions met (part of PBSP, part of teaching alternative skills, staff trained; plan for eliminating use.)

What causes aggression and self injurious behaviors?

- Aggression and self injury are behaviors, they are things people do.
- Aggression and self injury serve to alter ongoing circumstances.
- The learning history of the individual alters the probability of problem behavior

What causes aggression and self injurious behaviors?

- Main classes of circumstances that alter the frequency of these behaviors:
  - Attention
  - Tangibles
  - Escape
  - Self stimulation
  - Pain attenuation

Steps in Addressing Problem Behavior

- Functional Analysis
- Baseline frequency or duration data
- Functional Hypothesis Statement/statements
- Behavior Plan (designed by all identified functions)
  - Address motivation
  - Teach competing skill
  - Adjust consequences: extinction and other methods to insure behavior is inefficient and ineffective
- Implement with fidelity
- Monitor plan (fidelity checklists)
- Adjust plan based on data/effectiveness
  - Both for motivation, instruction and consequence

Classroom Arrangement

- Do you have immediate access to every part of the room?
- Can you see every setting where students will be spending their time (no dead space)?
- Do you have adult and student schedules in a prominent place?
- Are materials for instruction readily accessible?
- Is access to reinforcement under adult control?
- Do you have designated areas for various activities?

FBA: treatments selection

Saul Axelrod: Most interventions are selected based on premises other than functional relations such as:

Interventions familiar to the teacher

Interventions that worked in the past with other students

Topography based interventions (i.e., timeout for hitting)

Ease of implementation

These are poor criteria for why an intervention is selected!

Treatment Selection by Function

Selecting interventions by topography may actually worsen rate of behavior problems

(e.g. Time out for behaviors maintained by socially mediated negative reinforcement).

Interventions must be based on function, or functions, of problem behavior

(e.g. socially mediated positive or negative reinforcement)

FBA

- FBA can be thought of as a reinforcement assessment of sorts
- "Function" as used by behavior analysts is a term that is similar to reinforcement
- When one looks to find the function of a behavior one is looking to determine what variables likely serve as reinforcement for the behavior

Practical Implications: Making program changes based on FA:

(adapted from Carbone Clinic)

Antecedent Manipulation (stimulus control/motivation)

- Increase pairing
- Reduce # of demands (VR)
- Increase # of easy skills interspersed
- Decrease response effort
- Further reduce errors (modify prompt procedures)
- Change instruction pace (ITI)
- Decrease/increase session time
- Conduct Sr^+ assessment
- Change field of stimuli
- Increase # of teaching trials
- Change physical environment
- Change aim
- Teach pre-requisite skills
- Decrease # of goals/objectives
- Build MO by deprivation of specific reinforcers
- Change teaching procedure
- Other:

Consequence Manipulation (reinforcer/extinction/punishment)

- Provide more valuable reinforcement
- Provide higher rate of reinforcement (lower VR)
- Reinforce immediately
- Provide greater magnitude of reinforcement
- Reinforce on transfer trials
- Better use of extinction
- Improve implementation of differential reinforcement
- Other:

The Behavior Support Plan:
3 Critical Components of Intervention

1. Reduce motivation to engage in problem behavior

2. Teach competing skill within functional response class (manding v. problem behavior)

3. Extinction: problem behavior does contact reinforcement (must consider safety issues)

A plan for each function

- PBSP should be function specific
- The same behavior may require separate plans for each function
  (Running example)
- Avoid “shotgun” approaches to intervention

Training Staff: Behavior Management

When behavior plans do not work it is often because of issues related to fidelity

- Teach staff to "catch them being good"
- Teach staff to maintain and review data daily
- Teach staff to remain calm in all situations
- Teach staff "hands off" methods of discipline

Training Staff: Behavior Management

- Establish a focus on teaching appropriate behavior rather than reacting to problem behavior
- Establish a focus on keeping students meaningfully engaged
- Establish an environment wherein teachers support one another: they come to each others' assistance when needed
- Have emergency plans and procedures established in advance so staff know how to respond when crisis do arise

Considerations in Evaluating Interventions

- Is intervention being done correctly?
- Is intervention being done consistently?
- Is instruction (concepts/stimuli) arranged faultlessly? clear examples/non-examples across irrelevant variables
- Is intervention being done often enough?
- Is data accurate?
- Is enough time allotted to do the intervention (practice replacement behavior successfully)?
- Are interventions procedures clearly stated?
- Are staff able to adjust prompt level and reinforcement on a moment to moment basis?

"I could have shouted at the subjects of my experiments, 'Behave! Behave as you ought!' Eventually I realized that the subjects were always right. They always behaved as they should have behaved. It was I who was wrong. I had made a bad prediction."

Frazier speaking in B.F. Skinner's novel, "Walden Two" (Skinner, 1948, p. 240).

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Contact Information

www.pattan.net

Willow Hozella

whozella@pattan.net

pennsylvania
DEPARTMENT OF EDUCATION
Bureau of Special Education
Pennsylvania Training and Technical Assistance Network

Commonwealth of Pennsylvania
Tom Wolf Governor