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Incorporating ABA Principles in OT: A Collaborative Approach Towards Pediatric Patient Care and IPE

Dr. Aditi Mehra DHS, OTR/L

A collaborative journey from OT to ABA...
Learning Outcomes

After this course, participants will be able to:

1. Define the underlying principles of applied behavior analysis (ABA).
2. Identify the principles of ABA to manage behaviors and improve patient outcomes.
3. List strategies to foster inter-professional collaboration and education.

“Playing nice in the sandbox.”

“ABA therapy turns children into robots.”
“ABA strategies are manipulative.”
“OT’s don’t have evidence to support Sensory strategies.”
“How can Brushing programs help?”
“OT is not evidence based and is simply play therapy.”
“ABA therapists act very superior and condescending.”
“ABA therapy only works for children with Autism.”
But we do have a common goal....

Evidence-based strategies

ABA

OT

external events

observable behavior

internal events

physiology

environmental effects

Common Goal:
Create meaningful, socially significant changes in the lives of people we serve.

Internalistic vs. Externalistic

**OT**
- Physical / psychological barrier
- Adaptations/accommodations
- Consider feelings and emotions
- Consider culture, environment, values & beliefs.

**ABA**
- Not the child’s fault
- Try different ways of teaching
- Never blame the child if learning does not occur
- Change the environment and consequence to change behavior
Collaboration vs. Confrontation

Importance of Inter-professional Education

- The American Occupational Therapy Association (AOTA) asserts that entry-level occupational therapy curricula should include inter-professional education (IPE) in which students have opportunities to learn and apply the knowledge and skills necessary for inter-professional collaborative practice. To achieve the goals of improved health outcomes and client experiences, along with reduced health care costs, practitioners must be prepared to contribute to inter-professional care teams.

(Earnest & Brandt, 2014)

What is ABA?

- ABA is the use of scientific principles of learning and using motivation to teach effectively for skill acquisition, fluency, and maintenance as a means of decreasing problematic behaviors.

(Cooper, Heron, & Heward, 2007)
Respondent vs. Operant behavior

- Controlled by antecedent in environment
- Not learned
- Occurs naturally
- Un-conditioned
- Pavlov
- Reflexive
- Involuntary

- Controlled by consequence
- Learning occurs based on consequence that follows
- BF Skinner
- Voluntary

Respondent or Operant behavior?

- Raising hand in class to answer a question?
- Shivering in the cold?
- Stopped by a police officer for speeding?
- Tickle in your throat?
- Walking in hallway?
- Name calling?
- Knee jerk when tapped with hammer?
Operant Behavior

- “All we need to know in order to describe and explain behavior is this: Actions followed by good outcomes are likely to recur, and actions followed by bad outcomes are less likely to recur.” (Skinner, 1953)

- Reinforcement vs. Punishment

Reinforcement

- “when a behavior is followed immediately by the presentation of a stimulus that increases the future frequency of the behavior” (Cooper, Heron, & Heward, 2007).
- Positive = add and Negative = take away.
- Negative: when a person’s behavior causes something they don’t like from happening to be taken away.
- Positive: add or present something that you like into your environment.
Different types of reinforcement...

- Susie is given a $5 bill when she completes a chore.
- Tammy uses a towel to dry her wet hands.
- Joe brushes his teeth on a daily basis.
- Your roommate is loud so it's difficult getting to sleep. You start wearing earplugs at night and now you can sleep.
- When the students sit quietly for class, the teacher rewards them by canceling the homework assignment for that night.

Punishment hurts the punisher

- “when a response is followed immediately by a stimulus change that decreases the future frequency of similar responses” (Cooper & Heron, 2007).
- Positive Punishment: Adding extra work when child does not complete their assignment.
- Negative Punishment: Teenager does not do chores, and loses access to phone, Xbox.
- Creates feeling of fear, dislike, and anxiety. (Activates the amgdala)
- Encourages avoidance and finding ways to be sneaky so as not to get caught.
- The “punishment” might actually be a reinforcer.
The 4 functions of Operant Behavior

- Attention (negative or positive): from peers, adults
- Escape: from person, task
- Tangible: desire for an item or activity
- Sensory: the action feels good (self stimulatory) or meets a sensory need

Consequence is the almighty teacher!

ABC’s of Behavior

- Antecedent
  - What happens before the behavior occurs
- Behavior
  - Observable, measurable, repeatable
- Consequence
  - What happens after behavior occurs
Do you know your ABC’s?

The “Can’t Do or Won’t Do” ABC Data Collection Chart

<table>
<thead>
<tr>
<th>When/Where does behavior occur?</th>
<th>Activity/ Setting</th>
<th>Developmental/Medical consideration</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
<th>Future behavior</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

- Date? Time? Location? of behavior
- What activity? Who else was there? Environmental conditions?
- Are there any functional limitations to performing this activity? Changes or medications?
- Any antecedent changes? Current health?
- What happened right before that may have triggered the behavior?
- Describe what the child did? What did you observe the child do?
- What happened after the behavior, or as a result of the behavior?
- Did he/she get attention, positive or negative?
- Based on the current consequence what’s the probability this behavior will continue to increase or decrease?

Caution about reinforcers!

- We must use what ACTUALLY is motivating to the child, NOT what we think should be motivating to the child.
- If it does not increase future behavior.....it is not a reinforcer.
- Preference assessments
- Satiation/deprivation
Extinction Burst

- It is a *momentary* increase in behavior which was once rewarded but now the reward is withheld or no longer available.
- The presence actually indicates that what we are doing is working.
- Often increases in intensity
- It does not last long

Using ABA principles for therapeutic success!

- Pair yourself as a natural reinforcer.
- Be the Conditioned Fun Person = instructional control
- Plan ahead/contrive situations to create opportunities for reinforcement
Act like a ‘light switch’.

- Shaping behavior
- Differential reinforcement is the reinforcement of one form of behavior and not another, or the reinforcement of a response under one condition but not another.

Appropriate behavior > *inappropriate* behavior

Positive Reinforcement  No Reinforcement

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Taking on the challenge for change.....

- Pair yourself as the reinforcing professional on the team.
- Ask to collaborate with ABA’s as part of the treatment plan.
- Be research ready.
- Educate them on your role.
- Practice what you preach: collaborate and be professional
- Highlight the pertinent developmental/medical perspective in OT.
Case Study

- Johnny is an 7 yr. old on your OT caseload at school.
- OT goals: handwriting, sensory regulation, class participation

Teacher expresses concern that despite adapting Johnny’s math worksheets/ pencil as per your recommendations... He is still not participating in math class. He participates in writing tasks in OT but this is not generalizing this into the classroom.

ABC example chart

<table>
<thead>
<tr>
<th>When/Where does behavior occur?</th>
<th>Activity/Setting</th>
<th>Developmental/Medical consideration</th>
<th>Antecedent</th>
<th>Behavior</th>
<th>Consequence</th>
<th>Future behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 2/5/18 9 am classroom</td>
<td>Rocket Math - Writing activity</td>
<td>Yes. Low tone Immature pencil grasp Low endurance with writing.</td>
<td>Presented with math activity</td>
<td>Peter threw his pencil and put his head down on the table.</td>
<td>Teacher stopped the timing. “Are you feeling ok Peter?” – positive attention and Escape</td>
<td>Continue to increase recommendation to teacher: ignore his behavior.</td>
</tr>
<tr>
<td>Tuesday 2/6/18 9 am Classroom</td>
<td>Rocket Math - Writing activity</td>
<td>Yes. Low tone Immature pencil grasp Low endurance with writing.</td>
<td>Presented with math activity</td>
<td>Peter threw his pencil and put his head down on the table.</td>
<td>Teacher ignored Peter. He did not finish his math and sat with his head down until music class.</td>
<td>Continue to increase recommendation to teacher: do not allow him to escape the task.</td>
</tr>
<tr>
<td>Wednesday 2/7/18 9 am Classroom</td>
<td>Rocket Math - Writing activity</td>
<td>Yes. Low tone Immature pencil grasp Low endurance with writing.</td>
<td>Presented with math activity and Teacher said: You need to do your work Peter, or you will have to miss music class.</td>
<td>Peter said “I don’t care! I hate math!” he threw his paper, pencil and put his head down.</td>
<td>Teacher ignored him. Peter missed music class</td>
<td>What next?</td>
</tr>
</tbody>
</table>
Case Study 2

- Audrey is a 2 1/2 yr. old girl with autism.
- You are her in-home early intervention provider
- Audrey is very fearful of new situations and people. Mom would like to enroll Audrey in a preschool class but is worried about her ability to participate.
- Audrey likes to label letters and numbers and watching alphabet songs on YouTube. She is very aversive to touch or being handled.
- Audrey has refused to participate and cried throughout her OT sessions thus far.

What are some ABA Strategies you can use to help with parent goals?

- Pair your self with a reinforcer – use the sensory profile
- Reserve the special alphabet video for your sessions only.
- Create an ‘if then’ scenario
- Break down goal into smaller increments
- Practice – reinforce- practice-reinforce
- Incorporate OT objectives into session
Resources/ Questions?

- Email: draditi@fitlearnersil.com
- www.Fitlearnersil.com
- www.fluencyinparenting.com

References

References:


- https://occupationaltherapyot.com/occupational-therapy-frames-of-reference/?fbclid=IwAR2G5_hLEXKszAWPGZIXuf3gQ2QqpeN1mH8TJ0fP5JIpadBwYabsRlu1So