ECHO AUTISM COMMUNITIES

Early Intervention

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Project ECHO

Which is it? Behavior or Sensory?

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ECHO Autism: Early Intervention Continuing Education

Successful Completion

- Successful completion of this activity, which includes participating in the educational offering, participating in the evaluation process, and completing the verification of attendance, enables the learner to satisfy the requirements for continuing education.

Continuing Medical Education (CME)

- *The University of Missouri - Columbia School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.*

- The University of Missouri - Columba School of Medicine designates this **live** educational activity for a maximum of ***1.5** AMA PRA Category 1 Credit(s)™*. Physicians should only claim the credit commensurate with the extent of their participation in the activity.

American Speech-Language-Hearing Association (ASHA)

- The Missouri Speech-Language-Hearing Association is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology.

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ECHO Autism: Early Intervention Speaker Disclosure

LPC, Social Work, Psychology, 50-minute hour CEs

The University of Missouri Continuing Education for Health Professions (CEHP) is part of an accredited university in the state of Missouri. As such, this program meets the requirements for Licensed Professional Counselors, Psychologists, and Social Workers with Missouri licenses. CEHP attests that this program contains **1.5** clock hours of instructional time. Licensed professionals measuring CE credit based on a 50-minute hour may claim up to **1.8** Contact Hours for full attendance at this program.

Relevant Financial Relationship Disclosures

Current ACCME (Accreditation Council for Continuing Medical Education) rules state that participants in CE activities should be made aware of any relevant affiliation or financial interest in the previous 24 months that may affect the planning of an educational activity or a speaker's presentation(s). Each planning committee member and speaker has been requested to complete a financial relationship reporting form for the **ECHO Autism: Early Intervention Series**

Kristin Sohl, MD,FAAP receives support:

- **Cognoa Behavior Health – research support**
- **Quadrant Biosciences – medical science collaborator**

All relevant financial relationships for the presenter(s) have been mitigated.

No other speaker or planning committee member has a relevant financial interest

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Learning Objectives

- The learner will identify evidence-based assessment tools to identify and measure potential challenging behavior.
- The learner will describe potential functions of behavior.
- The learner will list evidence-based strategies for addressing challenging behavior.

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Which is it? Sensory or Behavior?

- Definition from Merriam-Webster:
  - Behavior - anything that an organism does involving action and response to stimulation
    - Everything we do is behavior!
    - Some behavior is more helpful than other behavior.
- Our sensory systems help us to perceive and interpret the stimulation and react accordingly.
  - Technically, all behavior occurs because of sensory input.
  - When we have difficulty regulating input, it may lead to less helpful responses/behavior
- Difficult to separate "behavior" from "sensory"

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Assessment

- Step 1: Put on your Behavior Detective hats and let's figure out what is happening!
- Behavioral assessment will look at the relationship between environmental variables and how they impact the frequency of behavior.
- What is motivating the child?
- What occurs before and after the behavior?
- Does the frequency of the behavior change in response to different stimuli?

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Assessment

- Behavioral Assessment will focus on determining the function of the behavior
  - Descriptive/Informal: ABC data analysis
    - Collect data on the antecedents and consequences of the behavior during direct observation
    - Analyze the data to look for recurring combinations
  - Structured/Formal Assessment: Analog Functional Assessment, Trial-Based Functional Assessment, IISCA
    - Systematically manipulate the environmental contingencies in order to determine which condition leads to the highest rate of the target behavior

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Assessment

- ABC Analysis:

  Antecedent ➡ Behavior ➡ Consequence
- Antecedent: Event that occurred immediately before the behavior
- Consequence: Event that immediately follows the behavior
- Setting events: Event that may make a behavior more likely to occur
- *Example*: I didn't sleep well (setting event), I see Brittney has coffee (antecedent), I push Brittney and take her coffee (behavior), I drink coffee

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Functions of behavior

- The function of the behavior indicates the motivation for an individual to engage in a particular behavior.
  - Functional behavior assessments will help us determine what is motivating the individual and help us to design effective interventions
- We can be motivated by sensory experiences (e.g., biting our nails, a hot bubble bath, popping bubble wrap)
  - Behaviors that meet an internal need
- We are also motivated by other things (e.g., compliments, new shoes, dark chocolate, avoiding work)
  - Behaviors that allow us to access attention, access to preferred items, or to escape of avoid something we don't like

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Functions of behavior

- The same behavior can have different functions:
  - Brittney washes her hands several times a day because she is very worried about germs and may get agitated if she is unable to wash her hands as frequently as she would like.
    - May be motivated by an internal/sensory need
  - Laura washes her hands several times a day because she really likes the lavender hand soap.
    - May be motivated by access to a preferred item
  - For our clients, the same distinction can be made for access to sensory items.
    - Some clients may appear to enjoy interacting with these items because they are preferred, for other clients they may reduce agitation

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Functions of behavior

- Functions can change over time
  - What may start as a behavior that was motivated by an internal need can change into a behavior that is motivated by access to attention
    - Example: A child engages in hand-flapping because it meets an internal need, but every time the behavior occurs, a parent comes over and tells them to stop. Now the child starts hand-flapping when the parent is there in order to access their attention.
- One behavior can have more than one function
  - A behavior may meet an internal need AND allow them to escape an aversive situation.
    - Example: A child is hypersensitive to loud noises. When their brother plays loud music, the child plugs their ears and hums very loudly until the parent tells the brother to turn it down.

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Functions of behavior

- Considering the function of the behavior does not automatically mean that the behavior does not have a sensory basis.
- It is important to recognize that there may be alternative explanations to why the behavior is occurring.
- Considering the alternatives may help you develop a more appropriate and individualized treatment for your client.

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Measuring change

- Regardless of what route you choose, make sure you are collecting data!
  - Before the intervention: Collecting baseline data will help you know where are starting and how far you've come
  - During the intervention: Data is the only way you can truly know whether the intervention is having the desired effect.
    - If the behavior isn't changing, it is time to re-evaluate!
  - After the intervention: This will help you know if the intervention produced lasting behavior change and whether additional work is needed

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Addressing challenging behavior

- Provide individualized interventions that are developed based on the results of the functional behavior assessment
  - Interventions that are not function-based may actually have an adverse effect
- Consult the literature when designing your intervention and use an evidence-based approach
- Ensure that you are teaching appropriate replacement behaviors that have the same function as the behavior you are attempting to reduce
  - *Example*: Teaching a child to ask for a break instead of flipping over their desk

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Addressing challenging behavior

- Provide access to sensory items or interventions *before* negative behavior occurs instead of afterward
  - Allowing access to preferred items when a negative behavior has just occurred may reinforce the behavior inadvertently
- Use sensory items as a reinforcer if they are motivating for that child
  - If the child isn't interested in the item or activity, it probably won't be an effective reinforcer.

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Example

- During therapy, your client fidgets in their seat, has difficulty paying attention to tasks, and frequently get out of their seat during work tasks.
- Heavy work and access to fidget toys are provided when the staff observe the child is not attending to instruction
- Staff take data but observe decreased attending and fewer completed tasks
- Our interventions didn't have the desired effect… what happened?
  - Potential answer: Heavy work and fidget toys may actually be reinforcing the lack of attending; the student has access to awesome toys AND a break from work! Hooray!

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Example

- Your student screams, covers their ears, and elopes from the auditorium every time there is a school assembly.
  - OT: Determines that the behavior is due to the hypersensitivity to the environment (e.g., loud noises, closeness to other people, the gym smells funny)
  - BCBA: Determines that the behavior is escape-maintained behavior and may be a result of the changes in the normal routine and the student's behavioral rigidity.
- There are conflicting recommendations…What do we do now?

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In Summary

- OT is awesome
- ABA is awesome
- When our powers combine, we are even better!

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School of Medicine
University of Missouri

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