**Fluency Plus: Managing Fluency Disorders in Clients With Multiple Diagnoses**

Kathleen Scaler Scott, Ph.D., CCC-SLP
Board Certified Specialist—Fluency Disorders
Professor, Misericordia University
Private Practice

**Definitions of Fluency Disorders**

**Today’s agenda**
- Definitions of fluency disorders
- Assessment principles and differential diagnosis
- Basics of Preschool and School-Age Stuttering Treatment
- Basics of cluttering treatment
- Atypical disfluency treatment
- Executive functioning
- Fluency disorders with concomitant diagnoses
- Case studies with management strategies

**Today’s agenda**
- Speech sound disorders
- Autism Spectrum Disorders
- Attention Deficit Hyperactivity Disorder
- Intellectual Disability
- Learning Disabilities
- Selective Mutism
- Gifted and Talented

**My background**
- A changing view of clients

**Definitions of Fluency Disorders**

**Stuttering-Like Disfluencies (SLDs)**

- **Repetitions of:**
  - Single-Syllable whole words (with tension) "I-I-I"  
  - Sounds or syllables (part-word repetition) "d-d-duck" "spi-spiderman"
- **Prolongations** "ssssometimes"
- **Blocks/Tense Pauses** "st--lck"
- **Broken Words** "bro--kan"
ABCs of stuttering

- Affective:
  - Feelings about stuttering
  - Guilt, shame, embarrassment, etc.
- Behavioral
  - Stuttering core behaviors (stuttering-like disfluencies, secondary behaviors)
- Cognitive (beliefs and interpretations of your stuttering)
  - Ex. “I can’t work in a field that requires doing presentations because I stutter”

Covert Stuttering

- I will hide my stuttering
- Varying degrees of avoidance
- Requires work on
  - Desensitization
  - Affective and cognitive components of stuttering

Covert Stuttering: Keep in mind

- There are varying degrees of covert stuttering, ranging from overt behaviors accompanied by covert aspects (i.e., word/communication avoidance) to completely covert with no overt behaviors noticeable to the casual observer
- Be careful not to over or under-interpret these behaviors
- Kids as young as 7 or 8 begin “Chasing the fluency god” (Starkweather) and can become masters of tricks and disguises

A Straightforward way to view cluttering

Cluttering is a fluency disorder wherein segments of conversation in the speaker’s native language typically are perceived as too fast overall, too irregular, or both. The segments of rapid and/or irregular speech rate must further be accompanied by one or more of the following: (a) excessive “normal” disfluencies; (b) excessive collapsing or deletion of syllables; and/or (c) abnormal pauses, syllable stress, or speech rhythm.

St. Louis and Schulte (2011)

Current Definition

1. Cluttering must occur in naturalistic conversation, but it need not occur even a majority of the time. Clear but isolated examples that exceed those observed in normal speakers are sufficient for a diagnosis.

2. This may also apply to the speaker’s mastered and habitual non-native language, especially in multilingual living environments.

3. This may be true even though syllable rates may not exceed those of normal speakers.
Current Definition

4 Synonyms for irregular rate include “jerky,” or “spurty.”
5 These disfluencies are often observed in smaller numbers in normal speakers and are typically not observed in stuttering.
6 Collapsing includes, but is not limited to, excessive shortening, “telescoping,” or “over-coarticulating” various syllables, especially in multisyllabic words.

Rapid Rate

Theory of Cluttering

- Bakker, Myers, Raphael, St. Louis (2011)
- The speaker is not necessarily speaking at a rate that is faster than normal. It COULD be faster than normal, but is not necessarily. The rate is faster than their system can handle, resulting in breakdowns in fluency or intelligibility.

Excessive “normal” disfluencies

Nonstuttering-Like Disfluencies

- Repetitions of:
  - Multisyllable whole words
  - Phrases
  - “open-open”
  - “I want—I want”

- Revisions
  - “I like unicorns, no, I mean dragons”

- Interjections/Fillers
  - “um, uh, er, well, like, so”

Excessive over-coarticulation
Abnormal pauses

Some examples
- http://www.mnsu.edu/comdis/ica1/papers/dewey1c.html
  What patterns in definitions do you notice?
  Anything else you hear going on?
  As you hear more pauses what do you notice?

Atypical disfluencies
- Atypical disfluencies
  - Final sound and syllable repetitions (w/ or w/o pause)
  - “light t” “train-ae”
  - Final sound prolongations
  - “thisss”
  - Within-word breaks, insertions
  - “op-en” “tea-he-he-heeacher”

“Atypical Disfluency Patterns” (ADP) (Reeves, 2010)

Fluency evaluation

What tools should we use?
- Stuttering Severity Instrument (Riley, 2009)
- Rating Scales (affective/cognitive)
  - What’s True for You? (Chmela/Reardon)
  - Behavior Assessment Battery (Brutten & Vannyciaghem)
  - Kiddy CAT (Vannyciaghem & Brutten)
  - OASES (Yaruss, Quesal, Coleman)
- Articulation tests
- Contrast your client’s speech in:
  - Reading
  - Role tasks (fast and slow)
  - Spontaneous speech
  - Conversation
  - Monologue (include “charged” topics)
  - Expository discourse

Components of Fluency Disorders: ABCs
- Affective
  - Your feelings about your fluency disorder(s)
  - Embarrassed, angry, sad, etc.
- Behavioral
  - Outward stuttering, cluttering, atypical disfluencies
  - Repetitions, prolongations, blocks
  - Secondary behaviors
- Cognitive
  - Your perceptions of your fluency disorder(s)
  - Everytime I say my name I’ll have a disfluency
  - People ignore me because I have disfluency
Principles for evaluating fluency disorders in clients with concomitant diagnoses

- Look for all fluency disorders in all populations; research is still emerging
- Determine fluency disorder separate from concomitant disorder (when possible)
- Examine fluency disorder and consider role any concomitant diagnoses may play

Examples

- **Non-fluttering like disfluency:**
  Clayton was burning the midnight oil.
  Equations and numbers were at trying to invade his house

- **Fluttering Like disfluency:**
  - Clayton still had fifteen pages to review

- **Word Final Disfluency:**
  - Hoping and praying to hear

- **Atypical Pause:**
  - He could no longer keep his eyes open so he hit the sack

- **Overcoarticulation:**
  - That night Clayton dreamed of numbers and equations

Cluttering

- Outline each criterion
- Describe the behaviors that might fit into this criterion
- Draw a conclusion

How do I get to the bottom of this?

- Determine what percentage of words are represented by:
  - NSLDs
  - SLDs
  - WFDs
  - Atypical pauses (for cluttering)
  - Over-coarticulation (for cluttering)

Differential Diagnosis

How do I get to the bottom of this?

- Getting a sample and doing a fluency analysis is key
- Approximately 500 words (or syllables) or 5 minute sample in conversation, monologue
- Word for word transcription and fluency coding
How do I get to the bottom of this?

- Determine what percentage of words are represented by:
  - NSLDs
  - SLDs
  - Word final disfluencies
  - Atypical pauses (for cluttering)
  - Over-coarticulation (for cluttering)

Overlap between cluttering and stuttering

- Cluttering is a fluency disorder wherein segments of conversation\(^1\) in the speaker’s native language\(^2\) typically are perceived as too fast overall\(^3\), too irregular\(^4\), or both. The segments of rapid and/or irregular speech rate must further be accompanied by one or more of the following: (a) excessive “normal” disfluencies\(^5\); (b) excessive collapsing\(^6\) or deletion of syllables; and/or (c) abnormal pauses, syllable stress, or speech rhythm.

  - Differential dx of rate:
    - Avoidance or escape behaviors?

Differential dx of NSLDs:

- Covert stuttering?
- Language issues?
- Bilingual issues?

Keep in mind

- There are varying degrees of covert stuttering, ranging from overt behaviors accompanied by covert aspects (i.e., word/communication avoidance) to completely covert with no overt behaviors noticeable to the casual observer
- Be careful not to over or under-interpret these behaviors
- Kids as young as 7 or 8 begin “Chasing the fluency god” (Starkweather) and can become masters of tricks and disguises

Overlap between cluttering and stuttering

- Cluttering and stuttering commonly occur together
- Speeding up rate can be a way to avoid stuttering for some. It will also trigger cluttering symptoms in some clients if they are prone to cluttering
- Word substitution can be subtle and variable
- You may only note signs or develop hypotheses in your evaluation which will warrant further exploration in treatment

Keep in mind

- Overlap between cluttering and stuttering
- Cluttering is a fluency disorder wherein segments of conversation\(^1\) in the speaker’s native language\(^2\) typically are perceived as too fast overall\(^3\), too irregular\(^4\), or both. The segments of rapid and/or irregular speech rate must further be accompanied by one or more of the following: (a) excessive “normal” disfluencies\(^5\); (b) excessive collapsing\(^6\) or deletion of syllables; and/or (c) abnormal pauses, syllable stress, or speech rhythm.

  - Differential dx of over-coarticulation:
    - Dysarthria?
    - Articulation issues?
Other things to note in differential diagnosis

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- Differential dx of speech rhythm: This is not the prosodic patterns noted in other disorders such as autism.

- Differential dx of speech rhythm: There is nothing in here about atypical disfluencies, which can co-occur with cluttering, but are not part of the diagnostic criteria for cluttering!

What features distinguish cluttering from stuttering

- Rapid rate resulting in breakdown of intelligibility
- Over-coarticulation
- Excessive normal disfluencies
- When rate is adjusted, symptoms often disappear (not always the case for stuttering)

Things to think about when making recommendations

- How often do these behaviors occur?
- How much do they interfere with a client’s overall communication effectiveness?
- How much do they have the potential to interfere with a client’s communication effectiveness?

Stuttering Treatment

Treatment: The Steps

- Preschool
  - The Indirect Approach
    - Parent Training Session One: Pausing
REMEMBER!

- For all parent training sessions:
  - Move from more to less structure
  - Books
  - Structured games with specific responses
  - Spontaneous play
  - Don’t just show them and tell them…have them do it!

Myth # 2

- Since we are saying that a decreased rate of speech can decrease disfluencies in preschoolers, we are saying that increased speech rate causes disfluencies in preschoolers.

Reality

- There is research to support the fact that caregivers altering their speech rates has facilitating effects upon fluency (Guitar et al., 1992)...
  - HOWEVER....
  - Stuttering is caused by a mix of neurological, genetic and environmental factors, the proportions of which are currently unknown
  - There is NO evidence to say that an increased rate of speech causes stuttering in children
  - As evidence, consider families in which with the same parental speech rates, only one of three children stutters

Treatment: The Steps

- Preschool
  - The Indirect Approach
    - Parent Training Session Two:
      - Delayed Response

- Preschool
  - The Indirect Approach
    - Parent Training Session Three:
      - Modified Questions

- Preschool
  - The Indirect Approach
    - Parent Training Session Four:
      - Repeat/Rephrase/Review of all steps
Treatment: The Steps

Preschool

The Indirect Approach

When to get more direct:

- Parents and all involved are consistently using strategies but there is no or limited response after 4 weeks

Direct Approaches

- Rainbow speech; easy speech; stretchy speech
- Model and correct—have them correct you (Dietrich, 2002) (cancellation)
- Cue and teach them to self-correct (cancellation)
- Silent Thinking

SCHOOL AGE AND BEYOND...

IDEA and Fluency

Need to look at feelings and attitudes
- If a child stutters alone in an empty classroom, does s/he need fluency therapy?
  - Yes, if:
    - S/he avoids words/speaking situations that impact educational performance through lack of typical class participation and discussion

Principles of Treatment

- Change the timing and tension of stuttering
  - Timing
  - Stretch
  - Tension
    - Neutral
    - Light contact
  - Neutral

Stuttering is Ironic
- Fight less, neutral more

Simulate moments of stuttering to learn to manage in real moments

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Ways you can use the “stretch” to manage moments of stuttering

- **First way (cancellation)** = **After you stutter.**
  After you stutter, go to neutral, then say the word again. Stretch the first vowel of the word and connect it to the next word. As an alternative, if you have already stuttered through the word, you can take back control by stretching the next word you say.

- **Second way (preparatory set)** = **Before you stutter.**
  Start at neutral and stretch the first vowel, connecting it to the next word.

- **Third way (pullout)**: **In the middle of a stutter.**
  Get stuck but don’t go to neutral. Just slide out of the block with a stretch, and connect it to the next word. (ex: b-b-birthday)

Cluttering treatment

**Foundations**

- **Short-term goals/objectives:**
  - 1) Client will identify when his listener has not understood him in 4/5 opportunities with 90% accuracy.
  - 2) Client will identify why his listener has not understood him in 4/5 opportunities with 90% accuracy.
  - 3) Client will repair communication breakdowns in 4/5 opportunities with 90% accuracy.

- **Activities to address targets**
  - 1) Client will identify when his listener has not understood him in 4/5 opportunities with 90% accuracy.
    - Increase eye contact
    - Identify when there is a breakdown
    - In reading
    - In structured game
    - In structured conversation
    - In unstructured conversation in the clinic
    - In functional situations outside the clinic
  - 2) Client will identify why his listener has not understood him in 4/5 opportunities with 90% accuracy.
    - Reasons a listener might not be understood
    - How I say it
    - Identify why there is a breakdown (flow charts)
    - In reading
    - In structured game
    - In structured conversation
    - In unstructured conversation in the clinic
    - In functional situations outside the clinic
Activities to address targets

3. Client will repair communication breakdowns in 4/5 opportunities with 90% accuracy.
   - Repair the breakdown (flow charts)
   - In reading
   - In structured game
   - In structured conversation
   - In unstructured conversation in the clinic
   - In functional situations outside the clinic

Flow chart

- Too mumbled = emphasize
- Too fast = pause
- Too soft = steady volume

Self-regulation

- Self regulation of over-coarticulation
- Number line emphasis
- Self regulation of rate
- Fragile rate

Treatment of atypical disfluencies

Middle School: Case One

Student: “J”
Graduate Student Clinicians:
Fall 2012: Kearston
Spring/Summer 2013: Kenslie
Fall 2013: Becca

Word final disfluencies
“J”: Background
- 5th grade (began and continued into 6th grade)
- Diagnosis of Asperger’s Disorder and ADHD
- No formal speech intervention in school but social group targeting pragmatics

“J”: Monologue
- Percentage of words that are:
  - NSLDs: 9%
    - 4% phrase repetitions, 33% revisions, 56% interjections, 7% single syllable whole word repetitions without tension, and 1% multiple syllable whole word repetitions
  - SLDs & Atypical Disfluencies: 5%
    - 9% part-word repetitions at the beginning of words, and 91% word-final disfluencies.
    - Awareness and cognitive misperceptions about how WFDs began
    - Fear of teasing regarding WFDs
      - “I and I was really scared they would make fun of me, but good th-thing that they didn’t.”

“J”: Therapy
- Approach/Goals
  - Working memory targeted
  - WFDs primary area of concern
  - Reason for SLP referral
  - Reason for parent referral
  - Child expressing concern over potential consequences
- Treatment Outcomes: “J”
  - WFDs on downward trend at time
  - Parent and child report decrease
  - Student moved through building working memory, identifying WFDs, applying pausing to simulated and real WFDs (“sign your brain needs time to think”)  
  - WFDs went to 0% and remained there for 4 years with no return
- Our current status
  - In depth analysis of areas of memory, syntax, and language organization
  - Developing profiles of students based upon testing scores
  - Targeting areas in treatment based upon testing scores

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Opportunities!

- Comprehensive evaluation and treatment if desired
- Done via Skype
- kscott@misericordia.edu
- Partnerships if desired

Areas and concepts

- **Area:** Organizing language
  - Visual organizers
  - Pausing while speaking
  - Big picture focus
- **Area:** Memory for language
  - Visualizing while speaking
- **Area:** Internal distractions
  - Ignoring and visualizing thought
  - Balance of areas will vary for each client

Step One: Organize

*What is my main point? How can I organize it?*

- Big Picture Focus *(Skill Work: Formulation & memory)*
  - Visualizing/Verbalizing
  - Picture to Picture
  - Known Noun
  - Known Noun in Sentence
  - Paragraph/page to picture
  - Generate categories/subcategories
- Visual organizers *(Compensate: Formulation)*
  - Big ideas
  - No more than 3 details per big idea

Step Two: Condense

*How can I say this in a shorter way?*

- Make it shorter *(Skill work: Hi level syntax)*
  - Embed adjectives
  - Increase clauses and complex sentences
  - No "add a thought" ("which is...")
  - 15 to 30 second conversational turns
- Expedite *(Compensate: Formulation)*

Step Three: Take time to Pause

*When will I need more time?*

- Pause and Silent Think *(Compensate: Formulation)*
  - Proactive
  - Complex story
  - Exciting topic
  - Reactive
    - In response to increased disfluencies (fillers, atypical disfluencies)

Step Four: Resist distractions...

*but realize they happen*

*How can I get back on track?*

- Practice Conversation interrupt *(Skill: Self-Regulation)*
- Use visualization to get yourself back on track *(Compensate: Memory)*
  - NOTE: Visualize in the way your brain normally does!
Let’s try

- Internal Distraction game
  - Just ignore
  - Tell what you are visualizing to hold in memory

Fluency and concomitant disorders

Why should I care about this?

- Although the clinician may or may not use formal testing to measure executive functions in clients with communication disorders, the clinician working with students with fluency and concomitant diagnoses should be aware of what executive functioning skills are and what signs of difficulties in each of these skill areas looks like.
- As the clinician learns to identify the executive functioning skills, s/he will gain a better grasp on how these skills can contribute to progress or lack thereof in treatment.

Executive Functioning

Rationale

- Although there may be trends toward specific types of executive functioning issues in specific populations, there will also be executive functioning issues unique to the individual.
- Therefore, gaining a broad overview of potential executive functioning deficits will assist the clinician in accurate identification of roadblocks to progress and proactive management strategies to combat these roadblocks.

Executive Functions

- Executive functions are described as those abilities which allow a person to:
  1. Plan a task (e.g., identify what is needed for task completion; break down a long-term task into short-term projects; set goals; develop a timeframe for completion);
  2. Organize the task (materials, support personnel, etc.)
  3. Execute the task;
Executive Functions

- Executive functions are described as those abilities which allow a person to
  - 4. Stay focused to the task and avoid distractions (attention, self-regulation);
  - 5. Engage in ongoing problem solving (be aware of roadblocks and determine possible solutions);
  - 6. Persist even when the task is difficult.
- There is a lot of overlap between these skills.

Speech Sound Disorders

- A survey of 1,184 speech-language pathologists in public schools regarding the co-occurrence of other disorders with stuttering showed articulation and phonological disorders to be the highest coexisting disorders among the children who stutter (Blood, Ridenour, Qualls, & Hammer, 2003).
- Concomitant speech sound disorders have also been identified as a risk factor in persistent stuttering among preschoolers (Paden, Yairi, & Ambrose, 1999).
- No studies have been conducted to date examining the co-occurrence of articulation disorders and cluttering and/or atypical disfluencies.

Speech Sound Disorders: Myths and Facts

- Myth: Work on speech sound disorders can trigger stuttering
- Fact: Stuttering is thought to be multifactorial, with a predisposition to trigger stuttering. There is no evidence to support a specific trigger to childhood stuttering. If one stressor was not present (such as work on SSDs), the predisposition would have been triggered by another stressor.

Speech Sound Disorders: Myths and Facts

- Fact: Sometimes strategies used with SSDs and those used with stuttering can be in opposition to one another
  - SSDs: emphasize your sounds, placement
  - Stuttering: light contact, gentle onset to sounds
- How to work this out:
  - Focus on gentle but accurate placement
  - Be sure that your terminology is consistent, especially if child is young, has limited cognition and/or there is more than one treating SLP

Attention Deficit Hyperactivity Disorders

- There is co-occurrence between fluency disorders and attention disorders (Arnott & Healey, 2001; Blood, Blood, and Tellis, 1999; Blood, Ridenour, Qualls, & Hammer 2003).
- Attentional weaknesses have also been found in cluttering (Blood, Blood, & Tellis, 1999).
- Difficulties with inhibiting responses such as responses to internal distractions are proposed to be a key area of deficit in ADHD (Barkley, 1997).

Attention Deficit Hyperactivity Disorders

- Our initial research work testing the skills of those with atypical disfluency show relative weaknesses in working memory, a known area of deficit in Attention Deficit Hyperactivity Disorder (Sutkowski, Tokach, Sutkowski, & Hammer, 2015; Sutkowski, Tokach, & Gurtzman, in preparation).
- Although attention was not measured specifically by our testing, qualitatively, many in our sample required redirection to task. Parents of the majority of our sample reported difficulties with filtering internal distractions (Scaler Scott, Sutkowski, Tokach, & Gurtzman, in preparation).
It is thought that fluency disorders may present more frequently in clients with ID, and that greater degrees of ID may be related to higher levels of disfluency (see Van Borsel & Tetnowski, 2007, for review). Fluency disorders have been identified in genetic syndromes, many of which include individuals with ID.

Intellectual Disability: Myths and Facts

- Myth: Those with ID are largely unaware of their stuttering, therefore have no affective and cognitive components present
- Fact: This is individual to the client
  - Consider that “all behavior is communication” and that noises, facial expressions, etc. may indicate frustration
  - Frustration may be “in the moment” as with preschoolers who stutter
  - Feeling of frustration and reactions such as avoidance can and will occur, even if clients cannot verbalize them as those without intellectual disability might

Learning Differences

- The literature at one time described cluttering as a complex syndrome of learning disabilities (Tiger, 1980).
- Auditory processing difficulties and difficulties with attention to auditory tasks have been found in those with cluttering (Blood, Blood, & Tellis, 1997; Blood, Blood, & Tellis, 1999; Blood, Blood, & Tellis, 2000).
- Decreased efficiency in processing syntactical forms has been found in children (Usler & Weber-Fox, 2015) and adults (see Usler & Weber-Fox, 2015, for review).
- It is also known that disfluency in general (stuttering and non-stuttering like) is seen more in clients with overt language disorders and/or in clients with subtle language disorders that are not identified on testing (see Bloodstein & Bernstein Ratner, 2008, for review).
Learning Differences

Word-final disfluencies have been identified in children with language disorders (Scaler Scott, Tetnowski, Flaitz, Yarus, 2014), literacy disorders (Sutkowski, Tokach, Scaler Scott, 2015), and attention disorders (Scott, Grossman, Abendroth, Tetnowski, & Damico, 2007). When the clinician is evaluating a client with any type of learning disability, it is warranted that they observe, test for, and ask about symptoms related to stuttering, cluttering, atypical disfluency, and excessive normal disfluency.

Selective Mutism

Selective mutism (SM) is a disorder whereby the client exhibits normal communication in select situations (such as in a home environment) but exhibits limited communication in other situations (such as at school). The origins of SM are thought to be based in anxiety disorders (American Psychiatric Association, 2013). Although this disorder is based in anxiety, it results in difficulties in daily communication.

Selective Mutism: Myths and Facts

Myth: Those with SM are not necessarily mute!
Fact: Those who talk significantly less in selected situations by definition fit the criteria for SM. This does not necessarily mean completely mute or largely nonverbal!
Myth: SM is a behavioral disorder where clients are mute to gain control
Fact: Disorder is anxiety based; ability to communicate in different contexts will depend upon contribution of a multitude of factors

Gifted and Talented

The federal definition of giftedness in the United States (US) is as follows:
Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities (Elementary and Secondary Education Act of 1965)

Gifted and Talented: Myths and Facts

Myth: A child who is gifted will perform above their age level on academic tasks and emotional tasks
Fact: A child may perform above age level on academic tasks, but at age level emotionally. Important to keep in mind when grouping children by interest and ability level.
Myth: A client who is gifted always welcomes challenging tasks
Fact: These clients often set unrealistic expectations for themselves for perfection; therefore, may avoid more challenging tasks and/or become frustrated more easily when things don’t come to them right away

Gifted and Talented

Each state within the US defines gifted and talented based upon this federal definition, but is not required to follow the exact federal definition (National Association for Gifted Children, 2017). Therefore, how gifted students are identified and defined varies by state.
Autism Spectrum Disorders

- Types of disfluency to be aware of:
  - All!
  - Population where may be more likely to see cluttering and/or atypical disfluencies

- Executive functioning features to be aware of
  - Self-regulation
  - Self-awareness and self-monitoring
  - Cognitive flexibility
  - Problem solving
  - Task persistence

Autism Spectrum Disorders: Case Study

- EF roadblocks in treatment
  - “I don’t want to plan it out”
  - Difficulties with task persistence, problem solving, and emotional regulation
  - High standards for self (G & T?)

- Overcoming EF roadblocks
  - In through the back door
  - Perspective taking: how pausing helps the listener
  - ENGAGEMENT IS KEY!!!

In general

- Think about the thinking patterns in autism
- Think about the cognitive flexibility in autism
- Think how both of these things are going to impact
  - Seeing the need for strategies
  - Receptivity to strategies
  - Carryover of strategies

To consider when planning treatment...

- How thought patterns can lead to lack of receptivity to strategies
- How to work this out
  - Using what we know about how they think to design treatment differently

Consider

- Our explanations and demonstrations
  - May need to be high level or they may shut us out

- In other cases our explanations and demonstrations
  - May need to be concrete or they may shut us out

Also...

- Our rules
  - Need to be congruent with what they know and have learned
  - Fit into their schema of “helpful”

- This is NOT an easy task!
Playing to ASD Cog Features

A rule-bound child feels more comfortable with lists of rules and expectations

But

Before you design something completely different, let’s not reinvent the entire wheel
Let’s start where we would usually start and modify from there

First, let’s clear up a myth

Some children with ASD are not aware of their disfluencies BUT
Some are and have negative feelings and attitudes about them
Some are aware but pretend they are not: defense mechanism
See this more so for cluttering and atypical disfluencies but I have seen it in stuttering as well

Also, remember

Identifying disfluency in others vs. themselves does involve different levels of perception
So does identifying disfluency in themselves on recordings (which some are sensitive to, so be careful)
The ultimate goal is for them to identify moments as they occur...so don’t stick too long with identification on recordings

Types of learners

Implicit

Explicit

With G&T especially understanding learning style become very important!

What we know about treatment of fluency disorders in autism

Stuttering

Brundage et al. (2013)

Word final disfluencies

Recovery in those not on spectrum
Mower (1987)
Luna et al. (2007): changes in EF w/maturity
Treatment by identification and correction
Tetnowski et al. (2012)
Van Borsel et al. (2005)
Scaler Scott, Block, Reardon-Reeves, et al. (2013)
Clinical recommendations

- What’s the priority
- What are the strategies that work best given their strengths, what keeps them engaged, etc.?

Clinical recommendations

- Given this, how do we work with families?
  - Determining priorities throughout the lifespan
  - Rethinking the need for intervention based up what we know about persistence of errors into adulthood?

Speech Sound Disorders: Case Study

- Case study
  - 4-year-old male
  - Working on phonological process disorders following the cycles approach since 3 years of age
  - Moderate stuttering began at age 4, characterized by 2 to 3 second blocks, facial tension, and personality changes

Speech Sound Disorders: Case Study

- Treatment approach
  - Focus on stuttering to gain an easier start to speech and to prevent long-term development of secondary behaviors
    - Rainbow speech
    - Put SSD work on hold for 3 sessions
    - Once was able to respond to cues for use of rainbow speech, incorporated gentle but accurate placement for SSD work
    - E.g., FCD work use touch cues for gentle approach to final sound production

Attention Deficit Hyperactivity Disorders: Case Study

- Case study
  - 12-year-old male with ADHD
  - Concomitant diagnosis of cluttering

- EF Roadblocks:
  - Impulse control and short responses
  - Working memory and recall of strategies in connected speech practice
  - Retrieval/language organization difficulties
  - Overcoming EF Roadblocks:
    - Visual organizers/reminders for strategies
    - “Extra effort saves me time”
Intellectual Disability: Case Study
- 16-year-old male with Down Syndrome
- Stuttering and Cluttering
- Ongoing difficulties with carryover outside of speech room and self-monitoring
- Signs of frustration but unable to have cognitive discussion about this

Learning Differences: Case Study
- 8-year-old male with diagnosis of: ADHD, language based learning disability, central auditory processing disorder
- Fluency diagnoses:
  - Cluttering
  - Word-final disfluency

Learning Differences: Case Study
- EF challenges:
  - Self-awareness
  - Task persistence
  - Impulsivity

Selectivity Mutism: Case Study
- 8-year-old female
- Diagnosis of stuttering characterized by part-word repetitions and fleeting blocks
- Many avoidance behaviors indicative of covert stuttering:
  - Changing voice/accents
  - Avoiding words ("hey you" for "mom")
- We came to find out:
  - Traumatic experience in kindergarten which resulted in counseling and home schooling
  - Determined anxiety of speaking was not only about stuttering
Selective Mutism: Case Study
- EF Challenges
  - Task persistence
- Overcoming EF challenges
  - Focus on communication first before could even get to desensitization strategies for stuttering

Gifted and Talented: Case Study
- 9-year-old boy
  - Moderate to severe stuttering characterized by up to 5 second blocks, facial tension, secondary behaviors, occasional avoidance behaviors

Gifted and Talented: Case Study
- EF Challenges
  - Things don't come easily: task persistence
  - His stuttering requires lots of staying in the moment to access a strategy vs. a trick
- Overcoming EF challenges
  - Use "strategic" nature to talk about approach to stuttering
  - Shorter tasks
  - Mindfulness activities

Autism Spectrum Disorders: Case Study
- Case Study
  - 10-year-old male with diagnosis of Autism Level 1
  - History of Childhood Apraxia of Speech
  - /r/ distortion
  - Cluttering (characterized primarily by over-coarticulation)
  - Atypical disfluencies

Autism Spectrum Disorders: Case Study
- EF roadblocks in treatment
  - "I don’t want to plan it out"
  - Difficulties with task persistence, problem solving, and emotional regulation
  - High standards for self (G & T?)
- Overcoming EF roadblocks
  - In through the back door
  - Perspective taking; how pausing helps the listener
  - ENGAGEMENT IS KEY!!!

Challenging Cases
- Remember...
  - It’s all about the cost-benefit ratio
  - When not ready make sure the door is left open and resources are provided...planting the seeds
  - Reach out to get the help and information you need
  - Take a long hard look at the priorities
  - If not a priority now it MUST be monitored for later
Clariom: Fluency Plus

Resources


Managed by Kathleen Scaler Scott and David Ward

Pro-Ed, Inc.

References


Resources

- First Cluttering Online conference: http://associations.missouristate.edu/ICA/
References


