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Evidence Based Practice for working with adults who stutter: Four clinical profiles

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Four challenging clinical profiles of adults who stutter (AWS) are identified and described, based on research available about each.

AWS who:

(a) have had little to **no therapy** prior to the time they seek you out;

(b) are **bilingual;**

(c) show **covert** stuttering;

(d) are looking for augmentative aids or **alternatives** to speech therapy (medications, SpeechEasy, support groups).

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AGENDA: ABOUT 10 MIN EACH ON:

- Introduction to Adults who Stutter (AWS) and the Fluency Shaping, Stuttering Modification, Cognitive Behavior Therapy approaches
- "No prior therapy" AWS Client
- "Bilingual" AWS Client
- "Covert" AWS Client
- "Alternative" AWS Client
- Fluency Shaping, Stuttering Modification, and Cognitive Behaviors across all four client types

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INTRODUCTION TO ADULTS WHO STUTTER (AWS)

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ADULTS WHO STUTTER: A REVIEW

- Most AWS have been stuttering all their life minus the first approximate 2 to 3 years ("developmental").
- The brains of AWS, when imaged, show compensatory effects of developmental stuttering.
- In general, we lay down new neural networks when we practice a new skill to the point of mastery.
- Severity is the simplest of our assessments and varies considerably, across and within individuals.
- The variability is always worth discussing.
- Attitude skills are probably the most important assessments we can take on an adult who stutters because we will be working with the client's *own* goals for therapy.

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Important Considerations for most AWS Clients:

- "Getting rid of stuttering" goal: Does your client want to speak more fluently? Does s/he want to stutter more easily? Does s/he want both? Why? How would life be different?
- Are we viewing a "giant-in-chains" kind of profile regarding stuttering? Or do we see relatively healthy coping patterns? (e.g., C vs. R)
- Are there difficulties with speech motor control or language formulation in this client?

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Fluency Shaping, Stuttering Modification, and Cognitive Behavior Therapy approaches for AWS

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All three approaches have some treatment efficacy evidence to support them.

All Tx & Rx relies on good Dx.

Fluency shaping approach

- The goal is to have stutter-free speech.
- The main drawbacks are:
  - Loss of speech naturalness
  - No real regard for the attitudes of the person who stutters
- The main benefits are:
  - Efficient means of communicating messages via greater fluency; that is, overall speech rate increases.
  - Useful approach for clients who are severe or who stutter frequently; many AWS cannot modify 80% of stutters when so many stutters occur.

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Fluency Shaping Approach, Continued

- The resulting goal is to help an AWS prevent stuttering in the most natural manner possible.
- While based on behaviorism, because we are working with adults, contingencies, tangible rewards, etc. are less appropriate. However, fading-out cueing and other behaviorist strategies might be appropriate.
- The benefits of Delayed Auditory Feedback (DAF)-assisted reading:
  - Passages with carry-over potential (topics of interest)
  - Questions about the reading, DAF-assisted
  - Discussion about the reading, DAF-assisted
  - Reading, unassisted, etc.

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Stuttering Modification Approach

- The goal is to stutter more easily and openly.
- The main drawbacks are:
  - Client needs to be aware of involuntary moments
  - Client will need to self-advocate, as stuttering will continue to occur, but in a new style or manner
- The main benefits are:
  - The client will experience desensitization, and even acceptance
  - Most clients report varying levels of success and do not report as much failure or relapse with this approach, as can be the case when success is defined as fluency and failure is defined as increased stuttering

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STUTTERING MODIFICATION APPROACH, CONTINUED

- Good ol' Van Riper!
- Evidence base is growing (e.g., Yaruss, Pelzarski & Quesal, 2010)
- Techniques include:
  - Identification
  - Modification
    - Cancellations
    - Pull-outs
    - Preparatory sets
  - Self-disclosure
  - Generalization
- When to bring in Fluency Shaping techniques of Slow rate, etc.?
  - Severe: Pre-Modification; Mild: pre-Generalization

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COGNITIVE BEHAVIORAL THERAPY

- Goal: Think more realistically about how listeners perceive "me as a stutterer" and what this means to "me"
  - (e.g., learning to care less about what listeners think).
- The main drawbacks are:
  - There is no evidence as of yet that this works as the sole approach; it needs to be combined with FS & SM
  - No real regard for the feelings, divorced from the thoughts, of the person who stutters (Luterman, 2001)
- The main benefits are:
  - The client begins to think and then feel and then act more positively about his/her speech
  - The client becomes more aware of past situations that have elicited negativity, and acts accordingly.

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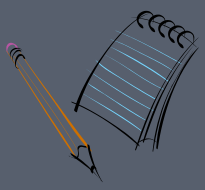

"No prior therapy" AWS Client

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Feelings/Attitudes;
Treatment Flowchart based on Assessment Data;
Example client (R)

Feelings and attitudes of the "no prior therapy" Client

- Guilty, over lost opportunities
- Confused
- Overwhelmed
- Angry or frustrated, over past starts & no-go's
- Either a "get work done/rushed" mode, to make up for lost time, or a very tentative mode, looking for what might be wrong with each approach, vs.
- "A sponge," a "quick study"; delight to work with
- Transcending stuttering: The Inside Story (Schneider, uploaded to youtube, 2010); also www.stuttertalk.com; stutteringhomepage, ISAD; www.stuttersocial.com

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Treatment Flowchart based on Assessment Data for the "No Tx" client

Severe?

- Yes: Sense of fluency
- No: Rule in or out the severity of Avoidance

Negative?

- Yes: Listening to the client! Counseling ("R")
- No: Overview of whole process and outcomes

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Client "R": moderate to severe stuttering; negative attitudes on the OASES (Yaruss & Quesal, 2006)

Separate the "physical" from "emotional" feelings

Video 1 – R-multiling

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"BILINGUAL" OR MULTILINGUAL" AWS CLIENT

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Background evidence; Feelings/Attitudes; Treatment Flowchart based on Assessment Data; Example client (R)

MULTILINGUALISM & STUTTERING BASICS

- Knowledge base that is still in its infancy (Van Borsel, 2011; Yairi & Ambrose, 2013).
- Thus, clinicians do not have a clear set of directives when working with multilingual clients who stutter.
- 95 -100% of stutterers stutter in both of the languages that they speak (Howell, Davis & Williams, 2009; Nwokah, 1988).
- Current authors contradict earlier claims that early bilingualism causes dysfluencies.

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Myth: Second language learning causes stuttering. Three sources of the myth:

1. Travis, Johnson & Shover (1937) & Stern (1948):

- Travis et al.: E. Chicago: *n*=4827 school-agers, 4- to 17-yo, survey:
  - Overall stuttering prevalence (2.61%)
  - English-only (1.80%) vs. Those who spoke 1 "foreign language" (2.80%) vs. Those who spoke 2 "foreign languages" (2.38%)
- Stern (1948) in Johannesburg: 1.66% monolinguals vs. 2.16% bilingual < 6 yo, *n*=1861
- Many methodological problems with these studies:
  - Survey? Single assessment? Representative? Which languages?
  - (Au-Yeung, Howell, Charles, and Sackin, 2000; Von Borsel, 2011)

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2. Howell, Davis & Williams (2009)

- 69/317 (22%) London school-agers who stutter were bilingual, seen clinically at 8- to 10-yo (Average reported age of stuttering onset = 4;9? Later than often reported).
- Of these, 38/69 (55%) reported "primarily or exclusively" using a non-English language at home.
- The 38 bilinguals were divided via preschool profile:
  - Used a Non-English language exclusively (LE): 15/38 ~ 40%
  - Bilingual with English before school (BIL): 23/38 ~60%
- Many concerns noted with Howell et al's (2009) conclusions (Bernstein Ratner, 2012; Packman, Onslow, Reilly, Attanasio & Shenker, 2009):
  - Clinical cohort; definition of stuttering as >4% syllables stuttered?
  - They found 22% of stutterers are bilinguals, a lower rate than bilingualism among all London schoolchildren (28%) from census data.

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3. How could second language learning present an "overload" for a young child, resulting in stuttering?
   - Karniol (1992): Does a first language need be solidified before L2 acquisition to avoid *syntactic* overload, and if not, would stuttering result?
   - If stuttering chronicity / risk factors were present and there were documented delays in both languages, then single language use *might* reduce processing, thus improving fluency or preventing stuttering onset, but this is currently an *untested hypothesis* (Bernstein Ratner, 2012).

- Therefore, for an AWS who stutters in 2 or more languages, listen to his/her background with learning the languages, stuttering onsets, and concerns about stuttering in each. Dispel myths whenever possible.

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MORE FACTS TO DISPEL THE MYTH THAT 2ND LANGUAGE LEARNING CAUSES STUTTERING:

- Percentage of monolinguals reporting past or present stuttering is ~ equal to the percentage of bilinguals who report that they stutter(ed): 22% (Au-Yeung et al., 2000).
- Bilingual children meet language milestones at same rates as monolinguals, and they do so quite fluently (Mennen, 2011).
- Bilingual and multilingual children do not differ on cognitive- or language-related task performance (De Houwer, 2011).

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EVIDENCE BASE RELATED TO SAMPLING ENGLISH:

Research on adult bilingual speakers (Nwokah, 1988; Schäfer, 2008) has shown **more interjections and stuttered function words** in L2 / English than in L1. This makes sense when you consider your own fluency in an L2 if you are an L1 English speaker as I am.

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CLIENTS; SPECIFIC CHALLENGES FOR THE BILINGUAL CLIENT:

- The need for interpreters (e.g., ASHA; Langdon & Conboy, personal communication)
- The practical need to work in the clinician's language(s) of say, English, and request practice and generalization exercises in the other languages.
- Use friends and family members who speak the other languages.
- Assess client's frequency of blocks per unit time in a monologue in the language that is unfamiliar to you, asking for assistance from client's friend/family member who speaks that language.

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- The need for discussion about how those speaking situations went: E.g., in my experiences:
  - "R": L1 = Slovak & Hungarian; L2 = English academic language versus English casual language; explaining abstract concepts like feelings
  - Arabic and aspects of therapy in Saudia Arabia
  - Tagalog and the morphology / syntax of the language
  - Spanish and its salience in professional and personal use: "C"

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Treatment Flowchart based on Assessment Data for the bilingual client. *Note: most standardized assessments are inappropriate.*

Severe?

- Yes: Increased sense of control and decreased stuttering in all languages (DAF-assisted reading)
- No: Rule-in or out the severity of Avoidance

Negative?

- Yes: Education of all involved about the problem(s); dispelling myths
- No: Overview of whole process and outcomes; discussion of goals and outcomes in each language

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SPANISH-SPEAKING CLINICIAN AND A MEXICAN-AMERICAN FAMILY: MOM=SPANISH-ONLY; 20-YR-OLD SON WHO CLUTTERS & STUTTERS; "C" 24-YO DAUGHTER WHO STUTTERS

Video 2_Mex-Amer

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"COVERT STUTTERING" CLIENT:

Feelings/Attitudes;
Treatment Flowchart based on Assessment Data;
Example client (R)

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Important evidence base

- Simulated or "fake" stutters are acoustically, neurologically, and perceptually identical to real stutters (Ingham, Fox, Ingham, & Zamarripa, 2000; Kelly & Conture; 1988; Moore & Perkins, 1990)
- Does "covert stuttering" appear in perceptibly fluent speech? (Peters & Boves, 1987; 1988)
- There is a huge body of evidence to suggest that layperson listeners are generally negative about stuttering and people who stutter, suggesting that for you and I as normally fluent speakers, being covert, or wanting to be, is understandable.

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Possible Feelings and Attitudes of the Client who is "Covert"

- Guilty
- Confused
- Frustrated, for example, about the low incidence of stuttering with a sense of loss of control
- Denial ("flight" rather than "fight") as a coping mechanism: Healthy? Not so much? Who is to judge?
- Negativity towards clinicians who have told them that stuttering is nonexistent at the surface; "all in your head," etc.

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The most important part of Assessment is to sample every speaking situation that the client is willing to engage in, so as to show the stuttering…

- …and to show the almost-stuttering

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Role-playing can be very effective for this purpose

Video 3_covert

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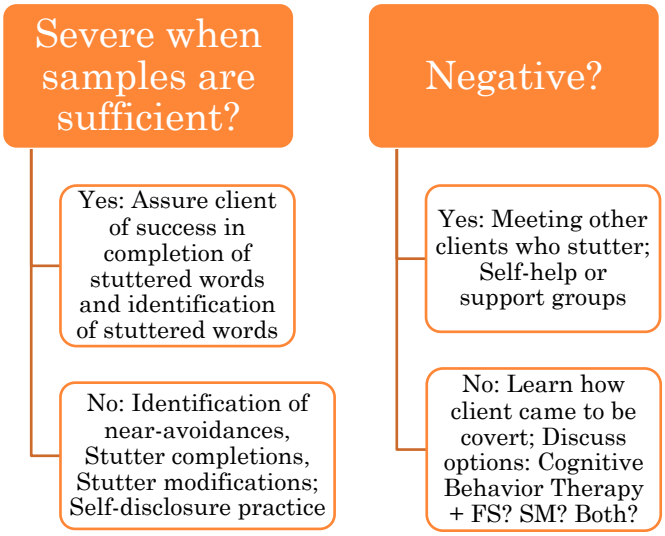
Treatment Flowchart based on Assessment Data for the "covert" client



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The importance of sufficient sampling (>100 words) whether AWS is covert or not:

- An average and range can capture variability and this is best done with 300 words at minimum.
- The *Stuttering Severity Instrument-4* (Riley, 2009) suggests that for the Speaking task, two 150-200 syllable samples be combined, within and beyond clinic samples.
- Reading vs. Spontaneous: If reading stutter frequency is higher than spontaneous stutter frequency, client may be word-switching.
- An AWS might avoid words, topics and situations to keep stutters from surfacing; > 100 words increases opportunity to hear actual stutters surface.
- An AWS might vary considerably in stuttering frequency, duration and type across situations (phone vs. face-to-face), sample types (monologue v. dialogue) and those variations cannot be adequately captured in only 100 words.

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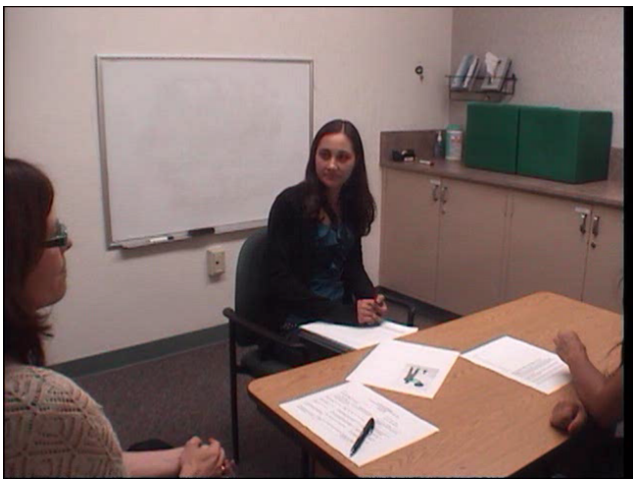
CULTURAL, EDUCATIONAL ASPECTS TO SELF-DISCLOSURE



Video 4_CulturalDisc

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THE MOST IMPORTANT INDICATOR OF EARLY PROGRESS FOR THE CLIENT WHO IS MORE COVERT IN HIS/HER STUTTERING BEHAVIORS

- Stutter frequency increases from baseline or fewer discontinued stutters.
- This is attributed to client's open stuttering on intended words, which, in the past, were avoided and replaced.
- Perhaps the "covert stuttering client" will begin to approach all words in spontaneous speech as he must do in reading, and then the more typical pattern shows up, whereby reading < spontaneous speech in stutter frequency.

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Client seeking alternatives to speech Tx or augmentation to Tx

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Feelings/Attitudes;
Treatment Flowchart based on Assessment Data;
Example client (AR)

Feelings and attitudes

- Stuttering is hard work: Feeling and fact!
- Stuttering is a behavior that can be both actively and passively diminished : Feeling and fact!
- It is always good to know about the "state of the art" and the "latest technology" for treating stuttering, as in any condition. Do I have access to [it]? Would [it] help me?
- No video clip as this comes up so often. ☺
- Our obligation is to embrace and not avoid or be biased against this viewpoint.

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"Alternatives"	Pro's	Con's
Medications (Dopamine receptor blockers)	~30-40% reduction in stutter severity scores (Maguire et al., 2010); New medications (e.g., olanzapine) low side-effects	Off-label use; Work with a physician who may not understand stuttering; Side-effects
SpeechEasy™ etc.	~30-70% stutter reduction for about 3 mos, depending on various contexts (Armson et al., 2006; Molt, 2006)	Cost; Effects diminish over time; Work with a provider who may not understand stuttering
Self-help groups	Feeling "you are not alone" which can result in stuttering more easily and openly; AWS only or AWS-led (e.g., National Stuttering Association)	Some members either advocate for just one speech tx program that worked for them, or are negative about speech tx (perspective?)
Support groups	Facilitated or hosted by an SLP so can be seen as a helpful adjunct to speech tx; Client self-advocacy	Might be biased by the SLP(s) / clients involved in the group

Treatment Flowchart based on Assessment Data for the "Alternative" client

Severe?

- Yes: Use DAF/FAF apps to determine stutter reduction from baseline. Can client carryover fluency? How does client feel about meeting others who stutter?
- No: Same as yes, but the client may not be as good of a candidate for medications or SpeechEasy

Negative?

- Yes: Explain rationale for meeting other clients who stutter; Self-help or support groups
- No: Again may not be a good candidate for SpeechEasy or medications. May want to mentor or inspire others in self-help groups; Advocacy days

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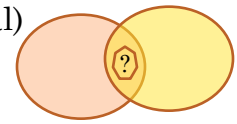
CONCLUSIONS

- Adults who stutter vary widely; Profiles or subgroups are one way of attempting to simplify this variability; Note that these subgroups can overlap (e.g., "C" covert and bilingual)



- Treatment plans can be derived from thorough assessment that points you to: Severity, given representative sampling; and Negativity, given that speech-related feelings, attitudes, thoughts and behaviors are discussed.

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