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Evidence-Based Practice

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Disclosure: Amazon store, I sell SSD-related products on my site.

What You will Learn

1. Defining EBP and E3BP
2. Considerations for External Evidence
3. EBP considerations re: Motor Speech/CAS
4. Ideas for Gathering Internal Evidence
5. Q & A

Core Elements of EBP

EBP
Adapted from
Sackett et al. 2000

https://www.asha.org/research/ebp/

Client Perspectives

The unique set of personal and cultural circumstances, values, priorities, and expectations identified by your client and their caregivers.

Resource: ICF-CY: https://apps.who.int/iris/handle/10665/43737
ICF-CY: International classification of functioning, disability and health: children and youth version

Clinical Expertise

Knowledge, judgment, and critical reasoning acquired through training and professional experiences

"As any field accumulates increasing knowledge about effective interventions, the volume and complexity of what we know exceeds an individual's ability to deliver its benefits correctly, safely or reliably." Atul Gawande, 2009

What do we do?

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External and Internal Evidence

The best available information gathered from:

External evidence: evidence from scientific literature: results, data, statistical analysis, and conclusions of a study.

Internal evidence: data - selected based on clinical expertise - systematically collected directly from the clients to ensure progress. (e.g. subjective observations & objective performance data compiled across time.)

https://www.asha.org/research/ebp/gather-evidence/

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Core Elements of E3BP

Adapted from Dollaghan, 2007

best available:

1. external evidence from systematic reviews
2. evidence internal to clinical practice
3. evidence concerning the preferences of a fully informed patient

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Why?

Optimize outcomes
- respect client & professional's time, expenses, effort
- understanding alternate options when progress is limited

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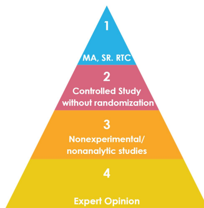
Levels of Evidence

NB: A lack of evidence does not equate to evidence of no effect.
- ASHA

MA: Meta-analysis
SR: Systematic Review
RTC: Randomized Control Trial
SCED: Single Case Experimental Design



Adapted from the Scottish Intercollegiate Guidance Network (Williams, McLeod and McCauley, 2021)

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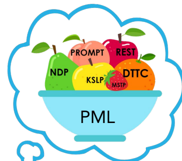
External Evidence in Motor Speech Intervention



DTTC: Dynamic Temporal and Tactile Cueing
K-SLP: The Kaufman Speech to Language Protocol
MSTP: Motor Speech Treatment Protocol
NDP: The Nuffield Dyspraxia Programme
PROMPT: Prompts for Restructuring Oral Muscular Phonetic Targets.
ReST: Rapid Syllable Transition Training
PML: Principles of Motor Learning

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External Evidence in Motor Speech Intervention

- As clinicians, we often hear that CAS requires a motor speech approach, which means you have to follow the principles of motor learning, BUT…
- Most PML research focuses on gross motor movements
- Most PML and Apraxia research focuses on adults
- In the past decade, Maas and colleagues have been doing research specific to PMLs and CAS. The results have been variable.
- The takeaway- determine what is best practice for the child in front of you.

Gathering External Evidence in Motor Speech Intervention

- ASHAWire
- speechBITE™
- ERIC (Education Resources Information Center)
- ASHA's Evidence Maps
- The Cochrane Library
- Campbell Collaboration
- What Works Clearinghouse (U.S. Dept. of Education)
- PubMed (MEDLINE)
- PsycNet
- JSTOR
- Attend Conferences

Gathering Internal Evidence from Clinical Practice in Motor Speech Intervention

Attendance: Arrived: Early On Time Late **Attended with:** Mom Dad Nanny Grandparent Support Staff N/A - in school **Who:** Observed Stayed in Waiting Room Dropped off N/A - in school

Homework Report:

Frequency of Home Rate: Regular Occasional/Intermittent Incidental No Practice **Home Practice Success Rate:** Great Good Moderate Minimal

Today's Activities: Drill: **Story and Craft:** **Follow Up Activity:**

Participation: Engaged Active/Busy With Support Chose not to Participate.

Goals and Progress:

GOALS:	CUEING MODALITY		PRODUCTION SCORE and COMMENTS:
	FRQ	MOD	
			L:SD WD PH SE RD C
			L:SD WD PH SE RD C
			L:SD WD PH SE RD C
			L:SD WD PH SE RD C
LANGUAGE SAMPLE			

Key:

Cueing*: **3** = Maximal Cueing **2**= Moderate Cueing **1**= Minimal Cueing **0** = No cueing/independent

FRQ = Frequency of Cueing **MOD** = Modality of cueing (visual/tactile etc.)

Level (L): SD = Sound WD = Word PH = Phrase SE = Sentences RD = Reading C = Conversation

Discussion with Parent:

Plan:

Previous Stories/Themes as Related to Goals/Targets

Adapted from the Motor Speech Treatment Protocol.

Gathering Internal Evidence from Clinical Practice in Motor Speech Intervention

At which level did client spend most of session?	Simultaneous	Direct Imitation	Delayed Imitation	Spontaneous
No cues	13	9	5	1
Min. Cues (1-2 cues/no tactile)	14	10	6	2
Mod. Cues (3>cues/no tactile)	15	11	7	3
Max. Cues (4>cues plus tactile)	16	12	8	4
Unable	17			

Adapted by Sue Caspari, M.A., CCC-SLP

I (independent)
P (prompt)
M (model)

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Steps for EBP (ASHA)

4 Clinical Decision — Evaluate and adjust as necessary

3 Assess Evidence — Internal: response? External Evidence: relevance? validity?

2 Gather Evidence — Internal and External Evidence

1 Frame Clinical Question — Population Intervention Comparison Outcome

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Tips and Tricks

1. Type your question into Google
   - Gather articles that might be helpful (MA/SR)
   - Read blog/website/media posts (to see the references!)
2. Read the abstract + conclusion
   - Keep reading or toss it out?
3. Unravel the mystery
   - What did you glean?
   - Email the author
   - Mix with your internal evidence

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Special Thanks

Thank you to Dr. Ruth Stoeckel and Dr. Aravind Namasivayam for your insight and pointers.

Food for Thought

1. How is E(3)BP supported or inhibited in your work context?

2. Is there a specific piece of research that recently swayed how you practice?

3. What will you change going forward to incorporate more E(3)BP in your practice?

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STUDENT: **_DTTC Progress Monitoring Grid_**

GOAL:

At which level did client spend most of session?	Simultaneous	Direct Imitation	Delayed Imitation	Spontaneous (2 days at 1, 2, 3= home practice)
No Cues	13	9	5	1 (mastered)
Min. Cues(1-2 cues/no tactile)	14	10	6	2
Mod. Cues (3>cues/no tactile)	15	11	7	3
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Unable	17			
	Keep targets in therapy for twice as long as it takes to get to the mastery level.			

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Adapted for use with DTTC by Sue Caspari from the Scaffolding Scale of Stimulability – Glaspey, A., & Stoel-Gammon, C. (2007). A dynamic approach to phonological assessment. *Advances in Speech Language Pathology, 9*(4), 286-296. doi:10.1080/14417040701435418