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**Evidence-Based Decision Making:
Troubleshooting Common Obstacles
to External Scientific Evidence**

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Speaker Disclosure

- Financial:
 - Clinical Research Associate for the ASHA's National Center for Evidence-Based Practice in Communication Disorders(NCEP)
- Nonfinancial:
 - ASHA certified SLP and ASHA member



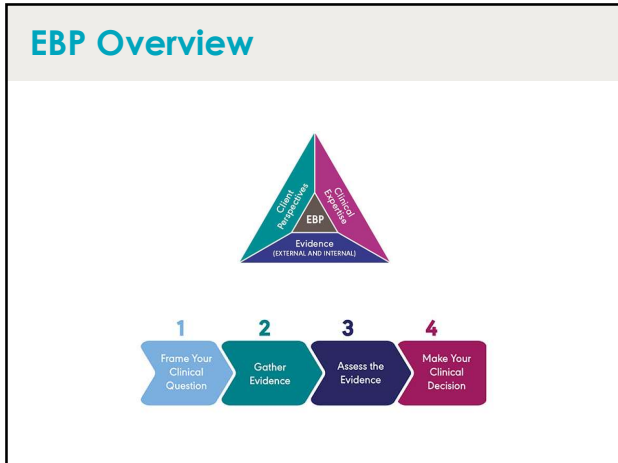
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Objectives

- Briefly review the components of Evidence-Based Practice (EBP),
- Describe common obstacles to identifying and applying external evidence to support clinical decision making,
- Identify solutions that can help clinicians overcome each of these obstacles, and
- Provide guided practice for using these solutions

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Coming up next

We've explored the concept of EBP. In the next activity, we'll describe the **barriers to integrating external research**.

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2 Barriers to Integrating External Research

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Common Research Obstacles

-  Limited research
-  Reduced quality or trustworthiness
-  Conflicting or inconclusive findings


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Limited Research: Lack of Research

-  New or rare disorder
-  Client characteristics not represented
-  New treatment technique
-  Novel assessment tool

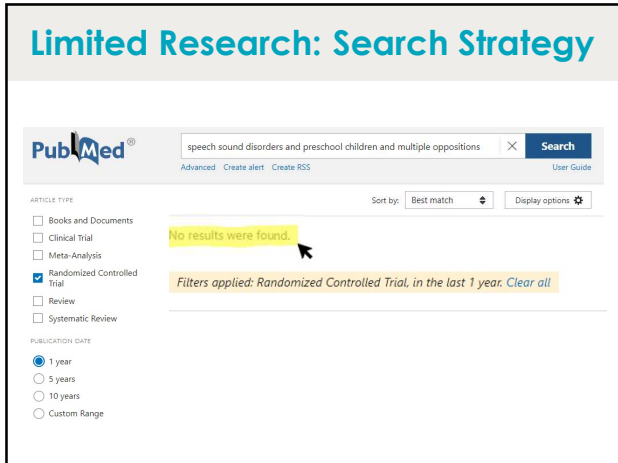
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Limited Research: Search Strategy

-  Too many required key words
-  Study design restrictions
-  Date range restrictions

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Limited Research: Search Strategy



speech sound disorders and preschool children and multiple oppositions

Advanced Create alert Create RSS Search

Sort by: Best match Display options

ARTICLE TYPE

- Books and Documents
- Clinical Trial
- Meta-Analysis
- Randomized Controlled Trial
- Review
- Systematic Review

PUBLICATION DATE

- 1 year
- 5 years
- 10 years
- Custom Range

No results were found.

Filters applied: Randomized Controlled Trial, in the last 1 year. Clear all

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Limited Research – Poor Quality Research



-  Too few participants
-  High drop-out rates
-  Poor design
-  Other Biases

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Conflicting Results

Methods: A systematic scoping review of eight databases was conducted. Of the 2399 sourced articles, 12 met the inclusion criteria. Another 8 articles were identified through reference lists of sourced articles. In these 20 articles, containing 21 studies, 1661 children aged 5-16 years participated. The data were extracted and analysed, and the intervention focus, efficacy, and level of evidence were examined. **Main contribution:** In the interventions intended for school-age children and adolescents with DLD, three intervention foci were identified that targeted aspects of language and language processing, as well as modifying the communicative environment. Of the included studies, 57% reported positive results, 14% reported mixed results, and 29% reported no effects on oral language comprehension. The level of evidence varied. One can have high confidence in the results of 19%, moderate in 38%, and indicative confidence in 43% of the included studies.

Due to limited research in the area of virtual reality (VR) for unilateral spatial neglect (USN), the results of the included intervention trials should be interpreted with caution. Overall, VR for USN showed promise when compared to conventional visual scanning training, however, the limited and conflicting evidence indicate the need for further high-quality research.

Maps:

- Stroke (Adults)

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Inconclusive Results

CONCLUSIONS FROM THIS SYSTEMATIC REVIEW

Displaying 4 of 4 conclusions

Results from five reviews suggest that cognitive training might work for improving memory, cognitive functioning, neuropsychiatric symptoms, behavior, depression, quality of life, learning and activities of daily living. Evidence is inconclusive as a result of small sample sizes.

Maps: Dementia

Three reviews addressed reality orientation. Authors of these reviews acknowledged the low quality and small sample sizes of studies included in the reviews. Although there were positive findings reported in cognitive ability, depression, and apathy, the evidence was inconclusive.

Maps: Dementia

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Coming up next

We've outlined common obstacles to integrating research evidence. In the next activity, we will explore the strategies for overcoming these obstacles.

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3 Overcoming Obstacles to Integrating Evidence


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Strategies for Overcoming Obstacles



Adjust your search parameters



Rely on the other components of the EBP triangle



Weigh methodological quality and risk of bias

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Adjusting Search Parameters: PICO Question

P opulation	What are the characteristics and/or condition of the group? Examples: age, diagnoses, severity, or linguistic or hearing status
I ntervention	What is the screening, assessment, treatment, or service delivery model that you are considering? Examples: hearing aid provision, instrumental swallowing assessment, or a particular dosage/format of services
C omparison	What is the main alternative to the intervention, assessment, or screening approach? Examples: comparing specific treatment techniques or comparing the reliability or validity of assessment tool to the current gold standard tool
O utcomes	What do you want to accomplish, measure, or improve? Examples: improved sound discrimination in noise, articulation, cognitive performance, or swallowing function

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Adjusting Search Parameters: Broad and Narrow PICO Questions

Too Broad

"What are the effects of breathing exercises on swallowing?"

- **Problem:** unfocused, too general → many irrelevant results
- **Solution:** Add or refine keywords, include more limiters

Too Narrow

"What is the effect of expiratory muscle strength training compared to the effect of effortful swallow training on aspiration on thin liquids in adult males with Huntington's disease?"

- **Problem:** too specific → unlikely to capture relevant results
- **Solution:** Reduce required keywords and other limiters

Balanced

What are the effects of expiratory muscle strength training compared to oropharyngeal exercises on aspiration in adults with neurodegenerative disease?

- Captures clinical scenario → sufficient, relevant results

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Adjusting Search Parameters: Other Search Strategy Elements

AND/OR/NOT	Broaden: Include ORs with many related keywords Narrow: Include ANDs and NOTs, which ensure multiple keywords are present or that words are not present respectively
Study Designs	Broaden: Include any experimental study Narrow: Include only RCTs
Date Ranges	Broaden: Include all dates Narrow: Include results within the last 5-10 years

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Considering Alternatives

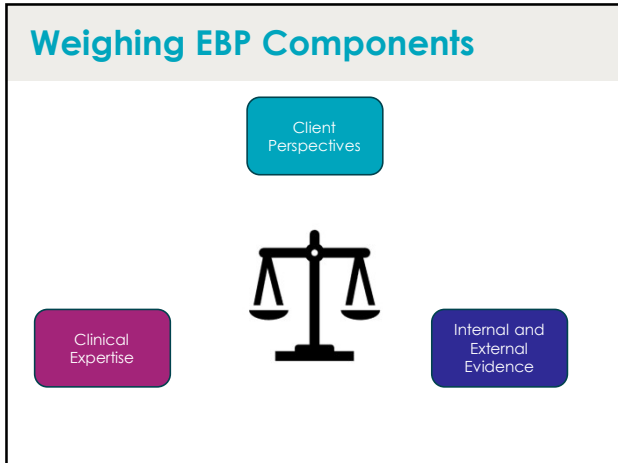
	Intended	Relevant
P opulation	Aphasia status-post TBI	Stroke populations
I ntervention	Visual Action Therapy	Gesture Facilitation of Naming
C omparison	VFSS	FEES
O utcomes	Percent consonants correct	Intelligibility

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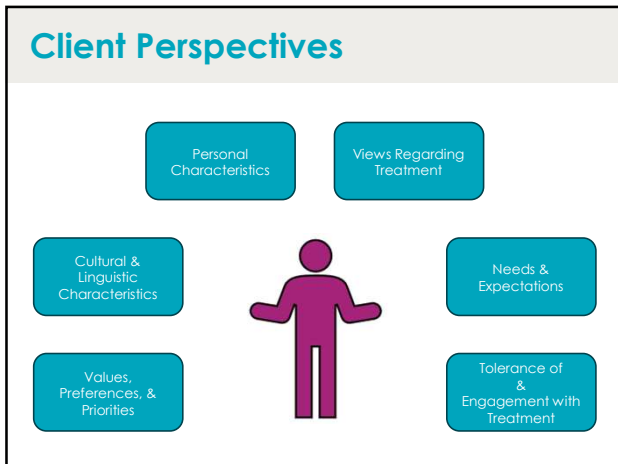
Weighing Quality and Trustworthiness

	Example consideration
Study Design	An RCT is less likely to have biased conclusions when compared to a single case study
Quality Assessment Tool	A study that has been assessed for quality, or one that receives a higher quality rating, may be more valid
Levels of Evidence	A conclusion with a higher level of evidence may have more valid take-aways regarding clinical benefit
Limitations	A study with a small sample size may be less trustworthy one with more participants
Sponsoring Body/ Conflicts of Interest	Research published by authors with no conflicts of interest may be more reliable than one published by the creator of a product or therapy technique
Publication Date	A more recent article may be more relevant or comprehensive than one published 20 years ago

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Clinical Expertise

Practice Management

THE PRACTICE PORTAL

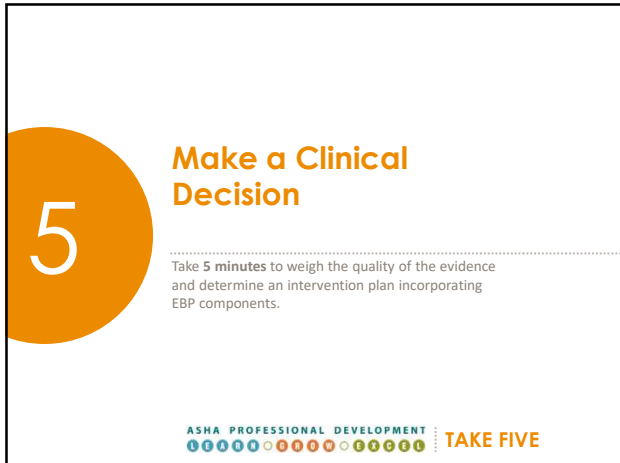
ASHA's Practice Portal offers one-stop access to resources to guide evidence-based decision-making on clinical and professional issues.

See ASHA policy documents for practice policies and additional information.

[Enter the Practice Portal](#)

The complex block includes three icons at the top: a stack of books, a person with a stethoscope, and a group of three people. Below the icons is the title 'Practice Management' and a sub-header 'THE PRACTICE PORTAL'. The main text describes the portal's purpose, and a button at the bottom is labeled 'Enter the Practice Portal'.

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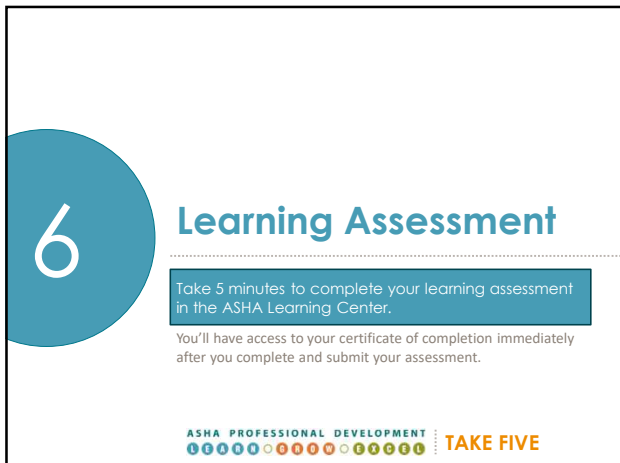
Make a Clinical Decision

Take 5 minutes to weigh the quality of the evidence and determine an intervention plan incorporating EBP components.

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The slide features a large orange circle on the left containing the number '5'. The title 'Make a Clinical Decision' is in orange. The text below is in black. At the bottom, there is a logo for 'ASHA PROFESSIONAL DEVELOPMENT TAKE FIVE' with a row of colored dots.

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Learning Assessment

Take 5 minutes to complete your learning assessment in the ASHA Learning Center.

You'll have access to your certificate of completion immediately after you complete and submit your assessment.

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The slide features a large teal circle on the left containing the number '6'. The title 'Learning Assessment' is in teal. The text below is in black. At the bottom, there is a logo for 'ASHA PROFESSIONAL DEVELOPMENT TAKE FIVE' with a row of colored dots.

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