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Clinical Application of Evidence-Based Practice in Aphasia: SPICES

Alyssa Autenreith, MA, CCC-SLP

Moderated by:
Amy Natho, MS, CCC-SLP, CEU Administrator, SpeechPathology.com

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Clinical Application of Evidence-Based Practice in Aphasia: SPICES

Disclosures

- Financial Disclosures
  - Employed by VA Pittsburgh Healthcare System
  - SpeechPathology.com will be making a donation to the Veterans Research Foundation of Pittsburgh (VRFP), a 501c3 private, non-profit research corporation that is independent of the Veterans Health Administration (VHA). This donation is requested in lieu of presenter honorarium.

- Non-financial Disclosures
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    - Member of Special Interest Group 2 (Neurogenic Communication Disorders)
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- Emily Boss, Brooke Lang and Rebecca Owens
- Dr. Patrick Doyle
- PIRATE Staff

Lecture Outline

- Evidence-Based Practice & Theory: Review
- Impetus for SPICES Development: Review
- Treatment Description: Comprehension & Production
- Presentation of Case Studies
Learning Objectives

After this course, participants will be able to:

- Identify the key differences between Semantic Priming to Improve Comprehension and Expression of Sentences (SPICES) and Verb Network Strengthening Treatment (VNeST).
- Describe the steps of the novel treatment, SPICES.
- Describe probe procedures for SPICES.

Terms and Key Words

- **Client**: The person receiving services from the clinician
- **Agent**: The subject of a sentence
  - e.g. The boy throws the ball.
  - Agent=subject (boy)
- **Patient**: The object of a sentence
  - e.g. The boy throws the ball.
  - Patient=object (ball)
Evidence-Based Practice

Current Best Evidence

Clinical Expertise

Client Values

Adapted from the National Center for Evidence-Based Practice in Communication Disorders
Evidence-Based Practice

Current Best Evidence

EBP

Clinical Expertise
Client Values

Adapted from the National Center for Evidence-Based Practice in Communication Disorders

VNeST & SPICES: Theoretical Models

- Spreading Activation Theory of Semantic Processing
- Verb As Core
Spreading Activation Theory of Semantic Processing

- Semantic network consists of related concepts stored as nodes, which are linked.

- Activation spreads from one concept node to another, and activation occurs constantly.

- For example: Activation of FIRE ENGINE might spread to other closely related concepts, such as other vehicles or the color RED.

- Activated concepts then prime other related concepts.

(Collins & Loftus, 1975)

Verb Centered Treatments: Verb As Core

1. Verbs are central to sentence formulation
2. An increase in verb retrieval will support sentence production

Adapted from Loverso et al 1986; Edmonds 2009
Evidence-Based Practice

Current Best Evidence

Clinical Expertise

Client Values

Adapted from the National Center for Evidence-Based Practice in Communication Disorders

Semantic Priming to Improve Comprehension and Expression of Sentences (SPICES)

- Clinical Observations:
  - Many people with aphasia produce mostly nouns
  - People with aphasia lack **specific** verbs in verbal output
  - People with aphasia demonstrate more difficulty with generating subjects than objects during VNeST treatment

(Schumacher et al., 2016, 2017)
The Impetus for Development of SPICES

- Research has supported bidirectional semantic priming between verbs and their arguments (Ferretti et al., 2007; Hare et al., 2009; McRae et al., 2005)

- VNeST is an efficacious treatment approach for expansion of verbal output from words to sentences (Edmonds et al., 2009; Edmonds & Babb, 2011; see Edmonds, 2016, for review)

- Noun retrieval may be a strength compared to verb retrieval for many PWA, possibly contributing to telegraphic output – see Verb as Core (Loverso, Selinger & Prescott, 1979)

- Both top-down knowledge of commonplace events (e.g., McRae & Matsuki, 2009) and personally-relevant associations often trigger generative responses of related actions and subjects (Hare, et al., 2009).

(Schumacher et al., 2016, 2017)

The goal of SPICES is to explore sentence-level treatment that would maximize the number of treatment trials, as well as focus on efficiency of successful subject and verb retrieval.

(Schumacher et al., 2016, 2017)
SPICES: An Overview

- Novel, sentence-level picture-based treatment
- Rooted in semantic-priming models (Collins & Loftus, 1975)
- Used to facilitate retrieval of verbs and their arguments (subjects and objects)
- People with aphasia were cued to identify and produce semantically-related subjects and actions in response to pictured objects.
- Treatment format allows for a large number of trials, as subject- and action retrieval trials are brief.

(Schumacher et al., 2016, 2017)

VNeST vs. SPICES

<table>
<thead>
<tr>
<th>VNeST*</th>
<th>SPICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplied <strong>verb (printed word)</strong> serves as the semantic primer</td>
<td>Supplied <strong>object (pictured object)</strong> serves as the semantic primer</td>
</tr>
<tr>
<td>Comprehension component focuses on plausibility of subject-object pairs at the <strong>sentence level</strong></td>
<td>Comprehension component focuses on subject-object pairs and verb-object pairs at the <strong>single word level</strong>, though therapist models <strong>sentence-length</strong> constructions</td>
</tr>
<tr>
<td>Verb is <strong>supplied</strong>; Subjects and Objects are <strong>generated</strong>.</td>
<td>Object is <strong>supplied</strong>; Subjects and Verbs are <strong>generated</strong>.</td>
</tr>
</tbody>
</table>

*Edmonds et al. (2009, 2011)
SPICES Treatment Set-up

- Client is presented with a field of 10 pictured objects. SVO sentence structure is visible for reference.

- Training is completed using **blocked trials** of 10 stimuli for the following groups:
  - Comprehension of Subjects
  - Comprehension of Verbs
  - Production of Subjects
  - Production of Verbs

Clinician: “Quarterback”
“Right; The **QUARTERBACK THROWS** the **FOOTBALL.**”

<table>
<thead>
<tr>
<th>Comprehension of Subjects</th>
<th>Comprehension of Verbs</th>
<th>Production of Subjects</th>
<th>Production of Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinician should load models with novel, specific or distantly related, subjects and verbs based on the client’s abilities.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:** **Target: “football”**

- **RUNNING BACK** catches the football.
- **COACH** throws the football.
- **REFEREE** inflates the football.
- **KICKER** kicks the football.
- **CHILDREN** spike the football.
Comprehension of Subjects

Video Demonstration

Demonstration Recap: Comprehension of Subjects

- Prior to recording, the clinician reviewed the objects with the client.

- For each trial, the clinician verbally presented a subject.

- The client pointed to the appropriate semantically related object.

- The clinician reinforced accuracy and modeled a salient S-V-O sentence.
Clinician: “Fumble”

“Right; The **RUNNING BACK** **FUMBLES** the **FOOTBALL.**”
Clinician should load models with novel, specific or distantly related, subjects and verbs based on the client’s abilities.

Example: Target: “football”

- Receiver SPIKES the football.
- Defense RECOVERS the football.
- Coach DEFLATES the football.
- Punter PUNTS the football.
- Center SNAPS the football.

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<th>Production of Subjects</th>
<th>Production of Verbs</th>
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</table>

Comprehension of Verbs

Video Demonstration
Demonstration Recap: Comprehension of Verbs

- Prior to recording, the clinician reviewed the objects with the client.

- For each trial, the clinician verbally presented a verb.

- The client pointed to the appropriate semantically related object.

- The clinician reinforced accuracy and modeled a salient S-V-O sentence.

Clinician points to a pictured object and requests verbal generation of a semantically related subject
Client: “MUSICIAN”

Clinician: “Right; Please use it in a sentence.”

Client: “The MUSICIAN plays the GUITAR.”

---

Encourage clients to produce highly salient and related subjects and verbs.

Example:
Client: “I strum the guitar.”
Clinician: “Could you give a more specific person? Whose job is it to strum a guitar?”
Examples of targets could include: Musician, music teacher, band member, etc.
Production of Subjects

Video Demonstration

Demonstration Recap:
Production of Subjects

- The clinician points to an object and asks the client to produce a related subject.

- Accuracy is reinforced and the client is asked to form an SVO sentence.

- Note the use of the visible SVO sentence structure and the clinician’s sentence repetition.
Clinician points to a pictured object and requests verbal generation of a semantically related verb.

**Client:** “Strum”

**Clinician:** “Right; Please use it in a sentence.”

**Client:** “The music teacher STRUMS the GUITAR.”
Encourage clients to produce highly salient and related subjects and verbs.

Example:
Client: “Eric Clapton has the guitar.”
Clinician: “*Has* is non-specific. Could you give me a stronger action word for what Eric Clapton would do to a guitar?”
Examples of targets could include: strum, restring, pluck

<table>
<thead>
<tr>
<th>Comprehension of Agents</th>
<th>Comprehension of Verbs</th>
<th>Production of Agents</th>
<th>Production of Verbs</th>
</tr>
</thead>
</table>

Production of Verbs

Video Demonstration
Demonstration Recap: Production of Verbs

- The clinician points to an object and asks the client to produce a related verb.

- Accuracy is reinforced and the client is asked to form an SVO sentence.

- The clinician should repeat the SVO sentence for reinforcement.

Errors in Production of Verbs

Video Demonstration
Demonstration Recap: Errors in Production of Verbs

- The clinician pointed to an object and asked the client to produce a related verb.
- The client produced a non-specific verb - “have.”
- The clinician referred to the SVO sentence structure to assist with verb and sentence generation.
- Accuracy was reinforced and the clinician repeated the sentence.

SVO Sentence Generation: How to Cue Clients

- Create a personalized cueing hierarchy for your client.
- For example:
  - Refer back to the visible SVO sentence structure first
  - Guide by asking wh- questions for missing parts (e.g., “WHO throws the football?”, “WHAT can you do with a guitar?”)
  - Utilize cues that work for your client (e.g., gestures, writing, etc.)
- Reinforce with oral reading and rehearsal/repetition
Things to Remember About SPICES Treatment

- Completed in blocked trials of 10 for each target area

- Amount of treatment time focused in each area can be client-dependent

- Comprehension is often treated first to allow clinician to prime responses for production portion

- Clinician may select personally relevant stimuli

Choosing Personal Stimuli

- Choose personally relevant, client-centered stimuli.

- Consider diverse stimuli for mild clients and semantically similar stimuli for more severe clients.

- Choose objects that directly receive actions.
  - FOOTBALL – throw, punt, catch, etc.
  - KNIFE – cut WITH, slice WITH, etc.
Measuring Treatment Progress

- Probe Protocol
  - Production/Comprehension Efficiency Probes
  - SVO Sentence Production Probe
  - Adjective-Synonym Probe (Control Task)

Clinical Application of Evidence Based Practice: Treatment Case Study #1
Client 1: Profile

- **Client’s goals:** Talking in complete sentences; improve upon "sound that won’t come"
- **Fiancé’s goals:** Strengthen his use of verbs and enhance feeling of empowerment that he can communicate effectively
- **Primary social settings:** Yoga studio and dinner with friends
- **Communication partners:** Fiancé, children, professionals and customers at his yoga studio
- **Topics of interest:** Yoga and outdoor activities (e.g. kayaking, climbing, skiing, and snowboarding)

Client 1: Medical History

- 62 y/o veteran from Colorado

- S/p aortic dissection and L hemorrhagic CVA (5/2013) with residual aphasia and right-sided weakness
Client 1: Social History

- Previously served a 20-year career in the Air Force

- Obtained his Master’s degrees in electrical and mechanical engineering and has work experience in these areas

- Fiancé: identified surrogate

Client 1: Speech/Language History

- Pre-PIRATE Evaluation completed November 2016; PIRATE session January 2017

- Received outpatient language services 2x/week

- Exhibited sparse, non-fluent, verbal output with an inordinate degree of noun production

- Notable verb > noun word retrieval difficulty
Assessments Supporting Treatment

- **Comprehensive Aphasia Test (CAT)**
  - (Swinburn, Porter, & Howard, 2004)

- **Story Retell Procedure**
  - (McNeil et. al, 2001)

- **Northwestern Assessment of Verbs and Sentences (NAVS)**
  - (Thompson, 2012)

---

**Client 1:**

**Comprehensive Aphasia Test (CAT)**

- **Naming Objects:**
  - Objects Named: 16/24
  - Raw Score: 27/48
  - T-Score: 51

- **Naming Actions:**
  - Actions Named: 0/5
  - Raw Score: 0/10
  - T-Score: 39

- Note: T-Scores have a mean of 50, with a standard deviation of 10.

(Swinburn, Porter, & Howard, 2004)
Client 1: Comprehensive Aphasia Test (CAT)

- Picture Description:
  - “uh the man is...sitting...down...the...boy was...the boy is...the cat, the cat...the boy is...the boy is sitting the cat uh...the...the cat is...is uh...fish uh the...window is...on the floor...the the man is...the man is...floozing soozing...uh the uh um....the...the books are...coming down...coming down...the cat is...uh...the cat is...uh the fish...the uh no"

(Swinburn, Porter, & Howard, 2004)

Client 1: Story Retell Procedure

<table>
<thead>
<tr>
<th>Story Number</th>
<th>Number of Correct Informational Units</th>
<th>Percentage of Correct Informational Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9/155</td>
<td>5.81%</td>
</tr>
<tr>
<td>2</td>
<td>13/156</td>
<td>8.33%</td>
</tr>
<tr>
<td>3</td>
<td>10/136</td>
<td>7.30%</td>
</tr>
<tr>
<td>Total</td>
<td>32/447</td>
<td>7.15%</td>
</tr>
</tbody>
</table>

(McNeil et. al, 2001)
Client 1: Northwestern Assessment of Verbs and Sentences (NAVS)

<table>
<thead>
<tr>
<th></th>
<th>VNT % Correct</th>
<th>VCT % Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Place (Ob1)</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>2- Place (Ob2+ Op2)</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td>3- Place (Ob3+Op3)</td>
<td>57%</td>
<td>100%</td>
</tr>
<tr>
<td>Total % Correct</td>
<td>77%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Of note, the abbreviations above translate to mean the following:
Ob1 - Obligatory 1 place verbs
Ob2 - Obligatory 2-place verbs
Ob3 - Obligatory 3-place verbs
Op2 - Optional 2-place verbs
Op3 - Optional 3-place verbs

(Thompson, 2011)

Why SPICES?
Client 1: Treatment Case Study

- Participated in PIRATE 5 hours per day, 5 days per week, for 4 weeks
- Received other treatments in addition to SPICES as part of a treatment package
- Primary focus was on verbal production treatment

Measuring Treatment Progress

- Probe Protocol
  - Production/Comprehension Efficiency Probes
  - SVO Sentence Production Probe
  - Adjective-Synonym Probe (Control Task)
Production/Comprehension Efficiency Probes

- 1-minute timed trials for each of the following tasks
  - Production of Subjects
  - Production of Verbs
  - Comprehension of Subjects
  - Comprehension of Verbs

- Place a visual field of 10 pictured objects and SVO sentence structure in front of the client. Verify comprehension of the pictured objects.

Production of Subjects/Verbs

- “I want you to tell me a person/action associated with the picture I point to, as quickly as you can.”
  - Subjects: “For example, if I point to this object [pen] a person associated with it is an author”
  - Verbs: “For example, if I point to this object [pen] an action word associated with it is write”.

- “I will give you up to 10 seconds to respond before we move on to the next item.”
Production Efficiency Probes: Subject

Subject Production (#)

Subject Production (%)

Verb Production (#)

Verb Production (%)

List 1
List 2
List 3
List 4
Comprehension of Subjects/Verbs

- "I want you to point to the picture associated with the person/action word that I say, as quickly as you can."

- Subjects: “For example, if I had these two objects [pen, phone] and I said ‘telemarketer’ which one goes with that person (phone).”

- Verbs: “For example, if I had these two objects [pen, phone] and I said ‘answer’ which one goes with that action word (phone).”

- “I will give you up to 10 seconds to respond before we move on to the next item”

Comprehension Efficiency Probes: Subject
Comprehension Efficiency Probes: Verb

 Verb Comprehension (#)  Verb Comprehension (%)

<table>
<thead>
<tr>
<th>List</th>
<th>Accurate Targets Identified Min. 6</th>
<th>List 1 Treatment</th>
<th>List 3 Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>List 1</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List 2</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List 3</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List 4</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SVO Sentence Production Probes**

- Place a visual field of 10 pictured objects and SVO sentence structure in front of the client. Verify comprehension of the pictured objects first.

- “I am going to point to a picture. I want you to make a sentence using that picture name as our object. I will give you up to 15 seconds to respond before we move on to the next item.” (Reference visual as needed).
Subject-Verb-Object Production Probes

Adjective-Synonym Probe
(adapted from Edmonds et al., 2009)

- Serves as a control task, meaning it should be stable throughout treatment.

- No materials need to be in front of the client for this probe.

- The clinician says, “Listen carefully. Complete these sentences with a synonym, or word with a similar meaning, for each adjective. For example, ‘Someone who is sick is also said to be ____ (ill).’ I will give you up to 10 seconds to respond before we move on to the next item.”
Control Task: Adjective-Synonym Production

Client 1: Comprehensive Aphasia Test Results

<table>
<thead>
<tr>
<th></th>
<th>PRE-ENTRY</th>
<th>EXIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T-Score</td>
<td>T-Score</td>
</tr>
<tr>
<td><strong>Score</strong></td>
<td><strong>Score</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Naming Objects</strong></td>
<td>27/48</td>
<td>25/48</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td><strong>Naming Actions</strong></td>
<td>0/10</td>
<td>4/10</td>
</tr>
<tr>
<td></td>
<td>39</td>
<td>50</td>
</tr>
</tbody>
</table>

(Swinburn, Porter, & Howard, 2004)
Client 1: Story Retell Procedure

<table>
<thead>
<tr>
<th>Story Number</th>
<th>PRE-ENTRY Percentage of CIUs</th>
<th>EXIT Percentage of CIUs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.81%</td>
<td>12.74%</td>
</tr>
<tr>
<td>2</td>
<td>8.33%</td>
<td>2.52%</td>
</tr>
<tr>
<td>3</td>
<td>7.30%</td>
<td>6.25%</td>
</tr>
<tr>
<td>Total</td>
<td>7.15%</td>
<td>7.14%</td>
</tr>
</tbody>
</table>

(McNeil et. al., 2001)

Client 1: Northwestern Assessment of Verbs and Sentences (NAVS)

<table>
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<tr>
<td>3- Place (Ob3+Op3)</td>
<td>57% - 100%</td>
<td>100% - 100%</td>
</tr>
<tr>
<td>Total % Correct</td>
<td>77% - 95%</td>
<td>100% - 100%</td>
</tr>
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Of note, the abbreviations above translate to mean the following:
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- Ob3 - Obligatory 3-place verbs
- Op2 - Optional 2-place verbs
- Op3 - Optional 3-place verbs

(Thompson, 2011)
Client 1:
Performance Summary

- Improved production of highly relevant, semantically-related subjects, trained verbs and SVO sentences, per SPICES probes

- Stable performance on Naming Objects subtest of the CAT and the Story Retell Procedure

- Improved performance on Naming Actions subtest of the CAT and the Verb Naming Test of the NAVS
Client 2: Profile

- **Client’s goals:** Speaking in sentences; improve understanding of what is said/read; writing
- **Wife’s goals:** Same as above; improve relationships with others
- **Primary social settings:** Home, neighborhood, church
- **Communication partners:** Wife, children, grandchild, neighbors, Bible study group
- **Topics of interest:** Handyman projects, the Bible

Client 2: Medical History

- 69 y/o veteran from Pennsylvania

- S/p L frontoparietal CVA (4/2016) with residual aphasia and mild right-sided hemiparesis
Client 2: Social History

- Previously served in the Army
- Attended school through grade 10; earned his GED
- Formerly worked as a bus driver as well as a janitor
- Wife: identified surrogate

Client 2: Speech/Language History

- Pre-PIRATE Evaluation completed December 2016; PIRATE session January 2017
- Received outpatient language services 2x/week
- Exhibited a moderate aphasia c/b impairments across language domains
- Verbal output was generally grammatical with frequent pauses and abandoned utterances d/t word finding difficulty
Assessments Supporting Treatment

- Comprehensive Aphasia Test (CAT)
  - (Swinburn, Porter, & Howard, 2004)

- Nicholas & Brookshire Language Samples
  - (Nicholas & Brookshire, 1993)

- Story Retell Procedure
  - (McNeil et al., 2001)

Client 2: Comprehensive Aphasia Test (CAT)

- Naming Objects:
  - Objects Named: 19/24
  - Raw Score: 34/48
  - T-Score: 54

- Naming Actions:
  - Actions Named: 5/5
  - Raw Score: 9/10
  - T-Score: 63

- Note: T-Scores have a mean of 50, with a standard deviation of 10.

(Swinburn, Porter, & Howard, 2004)
Client 2: Nicholas & Brookshire Sample

- Picture Description:
  - “The lady is spilling the sink over. The boy is getting the cookies down here and falling off this ladder… I guess, yeah. I think she’s doing it… no, he’s getting the cookies and handing to the girl and then he’s falling off the ladder.”

(Nicholas & Brookshire, 1993)

Client 2: Story Retell Procedure

<table>
<thead>
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<td>83/447</td>
<td>18.5%</td>
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(McNeil et. al, 2001)
Why SPICES?

Client 2: Treatment Case Study

- Participated in PIRATE 5 hours per day, 5 days per week, for 4 weeks
- Received other treatments in addition to SPICES as part of a treatment package
- Primary focus was on verbal production treatment
Measuring Treatment Progress

- Probe Protocol
  - Production/Comprehension Efficiency Probes
  - SVO Sentence Production Probe
  - Adjective-Synonym Probe (Control Task)

Production/Comprehension Efficiency Probes

- 1-minute timed trials for each of the following tasks
  - Production of Subjects
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  - Comprehension of Subjects
  - Comprehension of Verbs

- Place a visual field of 10 pictured objects and SVO sentence structure in front of the client. Verify comprehension of the pictured objects.
Production of Subjects/Verbs

- “I want you to tell me a person/action associated with the picture I point to, as quickly as you can.”
  - Subjects: “For example, if I point to this object [pen] a person associated with it is an author”
  - Verbs: “For example, if I point to this object [pen] an action word associated with it is write”.

- “I will give you up to 10 seconds to respond before we move on to the next item.”
Production Efficiency Probes: Verb

Verb Production (#)

Verb Production (%)

List 1 Treatment
List 3 Treatment

Comprehension of Subjects/Verbs

- “I want you to point to the picture associated with the person/action word that I say, as quickly as you can.”

- Subjects: “For example, if I had these two objects [pen, phone] and I said ‘telemarketer’ which one goes with that person (phone).”

- Verbs: “For example, if I had these two objects [pen, phone] and I said ‘answer’ which one goes with that action word (phone).”

- “I will give you up to 10 seconds to respond before we move on to the next item”
Comprehension Efficiency Probes: Subject

![Graphs showing Subject Comprehension (#) and Subject Comprehension (%)]

Comprehension Efficiency Probes: Verb

![Graphs showing Verb Comprehension (#) and Verb Comprehension (%)]
SVO Sentence Production Probes

- Place a visual field of 10 pictured objects and SVO sentence structure in front of the client. Verify comprehension of the pictured objects first.

- “I am going to point to a picture. I want you to make a sentence using that picture name as our object. I will give you up to 15 seconds to respond before we move on to the next item.” (Reference visual as needed).

Subject-Verb-Object Production Probes

- SVO Sentences
- Semantic Pair
- Semantic Trio

List 1
List 2
List 3
List 4
List 1 Treatment
List 3 Treatment
### Adjective-Synonym Probe
(adapted from Edmonds et al., 2009)

- Serves as a control task, meaning it should be stable throughout treatment

- No materials need to be in front of the client for this probe.

- The clinician says, “Listen carefully. Complete these sentences with a synonym, or word with a similar meaning, for each adjective. For example, ‘Someone who is sick is also said to be ____ (ill).’ I will give you up to 10 seconds to respond before we move on to the next item.”

### Control Task: Adjective-Synonym Production

*Control Task*
### Client 2: Comprehensive Aphasia Test Results

<table>
<thead>
<tr>
<th></th>
<th>PRE-ENTRY</th>
<th>EXIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Score</td>
<td>Score</td>
</tr>
<tr>
<td></td>
<td>T-Score</td>
<td>T-Score</td>
</tr>
<tr>
<td><strong>Naming Objects</strong></td>
<td></td>
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<td>Naming Objects</td>
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<td>42/48</td>
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<tr>
<td><strong>Naming Actions</strong></td>
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<tr>
<td>Naming Actions</td>
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<td>10/10</td>
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</table>

(Howard, Swinburn & Porter, 2004)

### Client 2: Story Retell Procedure

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<td>22.29%</td>
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<tr>
<td>2</td>
<td>20.5%</td>
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<td>3</td>
<td>21.2%</td>
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<tr>
<td>Total</td>
<td>18.5%</td>
<td>25.84%</td>
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</table>

(McNeil et al, 2001)
Client 2: Performance Summary

- Variable performance overall per SPICES probe protocol
- Improved object naming on the CAT with stable* action naming
- Improved overall production of CIUs during the Story Retell Procedure

Review

Current Best Evidence

EBP

Clinical Expertise  Client Values
Questions?

References


References


McRae, K., & Matsuki, K. (2009). People use their knowledge of common events to understand language, and do so as quickly as possible. Language and Linguistics Compass, 3(8), 1417-1429.


Thompson, C. K. Northwestern Assessment of Verbs and Sentences (NAV-S).