Current Trends in the Assessment and Treatment of Spanish-Speakers and Bilinguals Across the Lifespan

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Drs. Watson and Muñoz and Ms. Payne are faculty members at Texas Christian University and have no relevant financial or non-financial relationships to disclose. Dr. Prezas also is a faculty member at TCU. He has received financial compensation for the development of the test, *Assessment of Phonological Patterns in Spanish – 2nd Edition [APPS-2; 2009]*. In addition, he will receive remuneration for the distribution of this test.
At the conclusion of this presentation, participants will be able to...

- Articulate the clinical implications of current research for the assessment and treatment of anomia in aphasia.
- Describe issues that merit consideration when assessing and treating stuttering in culturally and linguistically diverse speakers.
- Identify strategies for assessing bilingual populations across the lifespan in the areas of phonology and child language disorders.
INTRODUCTION

- Impact of language contact and loss in service delivery language of pre-school and school-aged children.
  - Irmgard Payne, M.S., CCC-SLP

- Assessment and treatment of Spanish-speaking children with highly unintelligible speech
  - Raul Prezas, PhD, CCC-SLP

- Stuttering in Languages Other than English: *What do we know? What do we do?*
  - Jennifer B. Watson, PhD, CCC-SLP

- Current trends in the assessment and treatment of Spanish-speaker and bilinguals with Anomia
  - Maria L. Muñoz, PhD, CCC-SLP
IMPACT OF LANGUAGE CONTACT AND LOSS IN SERVICE DELIVERY LANGUAGE OF PRE-SCHOOL AND SCHOOL-AGED CHILDREN

Irmgard R. Payne, M.S., CCC/SLP
Texas Christian University
Both languages need to be considered during assessment (Bedore & Pena 2008; Kohnert, 2010)

- View bilingualism as a continuum of skills in either language (Valdes, 1988)

- Exposure and contact to English in a Spanish-speaking household
  - Quantity, quality and frequency of either language
  - Context of either language
  - Value placed on either language by the families
Information about language use is important

- Gathered by a parent/guardian interview
  1. Where from and how long here?
  2. Percentages of either language spoken
  3. Who in the family or community speak which language
  4. Other exposure to English (media, pre-school, babysitters, etc.)
LANGUAGE OF ASSESSMENT

Assessment procedure

○ Both languages assessed formally and informally
  ○ If necessary use both languages within formal assessment even if it invalidates the scoring; the important issue is that information is gathered about language knowledge and use
  ○ Code-switch if necessary during both formal and informal evaluation
  ○ Dynamic assessment
  ○ Language knowledge and use is assessed, not necessarily use of individual languages (Kohnert, 2008)
    ○ Habilidad de lenguaje, no de idioma
DETERMINATION OF LANGUAGE USE IN SERVICE DELIVERY

- Results of evaluation
- Home language
  - What do parents want?
  - Maintain L1 to communicate with parent
- Follow child’s bilingual continuum
  - As exposure increases in either language, knowledge and use will change
  - Continue with a diagnostic therapy
  - BICS/CALPS (Cummins, 1979)
  - L1 loss
- Classroom
L1 LANGUAGE LOSS

- Natural phenomena if L1 and L2 are not equally heard and used (Seliger, 1996)
  - What is lost?
    1. Vocabulary – remains, but ceases to increase
    2. Syntax
      - Reduction in inflectional morphology
      - Reduction in embedding
      - Article/adjective noun agreement
      - Prepositions.
    3. Codeswitching/codemixing increases
    4. More frequent use of L2 in L1 contexts and with bilingual speakers
  - Important to note that it’s not just loss, but a ceasing of learning in L1
  - Continuation of learning in L2 with loss of L1
* Increased and more rapid L1 loss in children with SLI (Restrepo & Kruth, 2000; Anderson, 2009)

* Limited L1 and L2 proficiency during language contact and subsequent L1 loss*

* Amount of time in therapy and at home where Spanish is used does not equal amount of English exposure in school and media
Kohnert & Derr suggest two approaches:

1. Bilingual approach
   - Simultaneously direct attention to communicative competence in both languages

2. Cross-linguistic approach
   - Directed at linguistic structures or communicative functions unique to each language
Train parents, paraprofessionals, and cultural community partners to provide structured intervention (Kohnert, 2005)

Use peer-mediated intervention strategies (Kohnert, 2005)

Teach new vocabulary in naturalistic contexts (Patterson and Pearson, 2005)
TREATMENT OF SCHOOL-AGED BILINGUALS

- Facilitating the development of literacy skills (Gutierrez-Clellan, 1999)
  - 1. General Guidelines for promoting literacy (Ruiz, 1995)
    - Allow child to choose language and topic
    - Incorporate child’s personal experiences
    - De-emphasize the correctness of the mechanics
    - Use L1 to mediate literacy development in L2
  - 2. Cooperative learning techniques
  - 3. Word de-coding skills
  - 4. Silent reading and reading aloud
TREATMENT OF SCHOOL-AGED BILINGUALS

- Increase the child’s speed, accuracy, and efficiency in processing language during real-time communicative interactions (Kohnert, 2005)
  - Increase verbal working memory
  - Facilitate gains in perceptual and attentional skills related to language input
  - Promote increased automaticity of language input
  - Develop strategies to improve overall communicative functioning
IF L1 LOSS EMINENT, WHY CONTINUE TO WORK BILINGUALLY?

- Build on what child has already learned (Gutiérrez-Clellan, 1999)
  - If child assessed at 3 and child has mostly learned in L1, should not cease working with what child has already learned.
  - Build on L1 knowledge while L2 learning begins
  - Maintain the communication with parents (Fillmore, 1991)
    - Receptive may remain, even if L1 expressive is lost

- L1 loss different for each child
  - Learning may continue during the time that L1 is still active

- Greater improvement seen in children from Spanish-speaking homes when the therapy is provided in Spanish or bilingually even as English is learned (Austin, 2007)
REFERENCES


Patterson, Pearson (2005)


Assessment and treatment of Spanish-speaking children with highly unintelligible speech

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SPEECH SOUND DISORDER (SSD)?

- Case history and preliminary information
  - Family Concerns
  - Dialect(s) spoken
  - Language use (e.g., home)
  - Proficiency
  - Age
  - Program – (English immersion, dual-language)

- Testing phonological skills in both languages
  - Use of support personnel, if needed (e.g., interpreters)
  - Determination – scores low in one language or both?

(Goldstein, 2004; Prezas, 2010)
Monolingual Spanish-speakers:
- consonant sequence/cluster reduction
- stridency deletion (dialect dependent)
- deviations of liquids (i.e., flap /ɾ/ and trill /r/)

Additionally in Bilinguals (Spanish-English):
- Similar phonological PATTERNS in both languages
- Speech sound development of bilingual children:
  - Less than 4-years-old
    - Dissimilar and more errors initially than monolingual peers
    - Still within normal range
  - Greater than 4-years-old
    - more similar to monolingual peers

(e.g., Fabiano, 2006; Fabiano-Smith & Goldstein, 2010; Gildersleeve-Neumann, Kester, Davis, & Peña, 2008)
Children with SSD

- Monolingual Spanish speakers:
  - Low intelligibility to individuals outside of immediate family

- Additionally in Bilinguals:
  - Low accuracy in BOTH languages

- "Red Flags" and other deviations:
  - Initial consonant deletion
  - Fronting/backing
  - Cluster/sequence reduction
  - Liquids/stridency (e.g., /r/; lisps)
  - Weak syllable deletion

(Dodd, Holm, & Wei, 1997; Holm & Dodd, 1999; Goldstein, 2000; Prezas, 2008)
DIALECTAL CONSIDERATIONS

- Most prevalent dialects in US – Mexican & Puerto Rican (consonant differences)

- Children from Mexican descent with adult-like speech vs. other dialects:
  - Sequences with /s/
    - Escuela = /eskwela/ vs. /ehkwela/ or /e_kwela/
    - Pescado = /peskaðo/ vs. /pehkaðo/ or /pe_ka_o/
  - Final Consonants (e.g., /s/)
    - Dos = /dos/ vs. /doh/ or /do_/ 
    - Guantes = /wantes/ vs. /wanteh/
  - Liquids (i.e., /l/ and /r/)
    - Verde = /berðe/ vs. /belðe/

(Goldstein, 2004; Prezas, 2008)
Speech Sound Evaluation

- Evaluation of Hearing
- Oral mechanism screening
- Child's phonological strengths and weaknesses
  - Severity level (i.e., mild, moderate, severe, profound)
  - Percentage of intelligible/understandable words
  - Stimulability information
- Language assessment (expressive and receptive)
- Metaphonological assessment
- Direction for intervention

(Prezas & Hodson, 2007)
Independent Analysis
- Single word & connected speech samples (e.g., narrative)
- Phonetic inventory – strengths/weaknesses both languages
- Estimates of intelligibility in known/unknown contexts

Relational Analysis
- Accuracy of shared (e.g., /p/ in both languages) Cs
- Accuracy of unshared (e.g., Spanish trill /r/; English /v/) Cs

Error Analysis
- Rule out cross-linguistic effects (<10%; Goldstein, Fabiano, & Iglesias, 2003)
- E.g., substituting English approximate /ɹ/ for Spanish flap/trill

Phonological Pattern Analysis
- Common patterns (e.g., cluster reduction)
- Uncommon patterns (initial consonant deletion) (Fabiano, 2007)
BILINGUAL INTERVENTION

- Bilingual Approach
  - Treat construct common to both languages
  - Phonological deviations common to both Spanish and English

- Cross-Linguistic Approach
  - Focus on skills unique to each language
  - Language-specific errors/sounds

- Language of Treatment based on history, use, proficiency and environment.

- Intervention in one language may generalize to the other language (Paradis, 2001)

(Goldstein & Fabiano, 2007; Kohnert et al., 2005; Kohnert & Derr, 2004)
TREATMENT APPROACHES

- **Phoneme Oriented “Vertical” Approach**
  - One goal taught until criterion is reached
  - Children with few speech sound errors

- **“Horizontal” Approach**
  - More than one goal addressed in each session
  - Targeting one goal in Language 1 and another in language 2 during the same session

- **Pattern Oriented “Cyclical” Approach**
  - Goals addressed in cyclical fashion
  - Goals recycled in subsequent cycles
  - Languages also rotated based on client needs

(Fey, 1992; Hodson, 2007)
Recommendations for Highly Unintelligible Sequential Bilinguals

- **Pattern Oriented Approach**
  - Target consistent, stimulable deviations
  - Stimulate non-stimulable sounds

- **Therapy in Spanish First preferred (if possible)**
  - Children who primarily speak Spanish in the home
  - Prior to Pre-K (limited English exposure)
  - Typically “Walk-in” students (prior to Pre-K program)

- **Therapy in both languages**
  - Once second language established (e.g., English)
  - Consider English input/environment (learning English in school setting)

(Prezas, 2011)
Word Structures (Omitted Segments)

“Syllableness” – if needed
- 2-syllable word combinations
- Vowel sequences
  - (e.g., [a-a] - /kasa/, /mapa/; [o-o] - /oso/, /foko/)
- 3-syllable/word combinations (e.g., /kamisa/)

Singleton consonants
- CV – word-initial /p, b, m/ if lacking
- VC – final /n/ if lacking (to facilitate final sounds)

Anterior/posterior contrasts (when stimulable)
- Velars – word initial /k/ and /g/
- Alveolars – word initial /t/ and /d/
/s/ sequences (for omissions only)

- Word-initial (i.e., /esp/, /est/, /esk/)*
  - Short, two syllable when possible
  - (e.g., ésto; ésta; esquí)

- *Do not target if substitution/omission of /s/ is acceptable in Spanish dialect
  - Substitute /s/ clusters in English for bilingual speakers of other dialects of Spanish
  - Also may substitute weak syllable deletion here using sequences listed (e.g., espero; escoba)

- Incorporate phrase: “Es un/a” ___ - (/s/ sequence word) after child demonstrates facility producing /s/ sequence in production-practice words.
liquids /l/ and tapped /ɾ/ (even if not stimulable)
- Word-initial /l/
  - [preceded by week of tongue-tip clicking]
- Flap (tapped) /ɾ/
  - (dependent on dialect)
  - [e.g., Puerto Rican dialect - /l/ substituted for /ɾ/ in coda position]
- /l/ and tapped /ɾ/ clusters
  - Do not blend initially
  - Only for children who already produce singletons
  - Word-initial /pl, bl, kl, pr, tr, kɾ/ if lacking
Potential Secondary Target Patterns

- Singleton consonants
  - Palatals /j, ʧ/  
  - Labial Glide /w/  
  - Trilled /r/  
  - Stridents /f, s/

- All Other Consonant Clusters/Sequences
  - Word-initial CC (e.g., /fl/, /fɾ/)  
  - Word-medial CC (e.g., /busko/, /caldo/)  
  - CCC (e.g., /kontrə/)

- Other considerations
  - Voicing Contrasts (prevocalic only)  
  - Phonemic Vowel Deviations  
  - Assimilations and other idiosyncratic deviations (if needed)
Bilingual Target Patterns

- **Sequential bilinguals**
  - Delay incorporation of English patterns
  - Usually second semester of first year of English instruction

- **Simultaneous (and sequential) bilinguals**
  - Begin in both languages
  - Consider targeting more feasible target patterns first (e.g., /s/ clusters in English vs. /s/ sequences in Spanish)

- **Targeting Phonological deviations:**
  - Focus initially on patterns common to BOTH languages
  - Consider language-specific errors/sounds
  - Alternate English/Spanish targets based on child needs
  - Combine English/Spanish targets over time
CLIENT EXAMPLE: “JUAN”

Background
- Age 3;4 – Mexican dialect
- Monolingual Spanish initially
- “Walk-in” student
- History of ear infections since birth

Preliminary assessment information
- Receptive language skills within normal limits
- Expressive language
  - One word utterances
  - Simple CVCV duplicated syllables
<table>
<thead>
<tr>
<th>Phonological Deviations</th>
<th>Occurrence Percentages*</th>
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<tbody>
<tr>
<td>Syllables</td>
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<tr>
<td>Consonant Clusters/Sequences</td>
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<td>Consonant Singletons</td>
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<tr>
<td>Prevocalic</td>
<td>20</td>
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<tr>
<td>Intervocalic</td>
<td>31</td>
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<tr>
<td>Postvocalic</td>
<td>75</td>
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</tbody>
</table>

*Assessment of Phonological Patterns in Spanish – 2nd Edition [APPS-2; 2009]

(Hodson & Prezas, 2009)
**Pretreatment Scores - 2**

**Consonant Category Deficiencies**

<table>
<thead>
<tr>
<th>Phonological Deviations</th>
<th>Occurrence Percentages</th>
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<tbody>
<tr>
<td><strong>Sonorants</strong></td>
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<tr>
<td>Liquids</td>
<td>100</td>
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<tr>
<td>Nasals</td>
<td>33</td>
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<tr>
<td>Glides</td>
<td>80</td>
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<tr>
<td><strong>Obstruents</strong></td>
<td></td>
</tr>
<tr>
<td>Stridents</td>
<td>83</td>
</tr>
<tr>
<td>Velars</td>
<td>44</td>
</tr>
<tr>
<td>Other [Anterior Nonstridents]</td>
<td>27</td>
</tr>
</tbody>
</table>

**Total Occurrences of Major Phonological Deviations**  \( \text{TOMPD} = 185 \)

**Pretreatment Severity Interval Rating** = High Profound

**Percentage of Consonants Correct-Revised** (PCC-R) = 15%
Phonemic / Phonotactic Inventory and Stimulability

- **Consonants**
  - Stops /p, b, t/
  - Nasals /m, n/
  - Glides /w, j/

- **Syllable Structures**
  - CV and Reduplications of CVs
  - Few Final Consonants
  - No Consonant Clusters/Sequences

- **Stimulable** (i.e., models, tactile cues, & amplification) at time of initial assessment [Age 3:4] for:
  - Final /n/
  - /s/ Sequences /esp, est/
  - Initial /l/
  - Not stimulable initially for flap /ɾ/ and trilled /r/
Syllableness - 3 syllable combinations

/s/ sequences – /est, esp/
- e.g., ésto; ésta
- Weak syllable deletion (e.g., espera)

Velars
- Word initial /k/
- Word initial /g/

Liquids
- Word-initial /l/
- Medial tapped /ɾ/ (e.g., pera)
- Word-initial /pl/
Cycle Two Targets for “Juan”

- /s/ sequences
  - Recycled /est/, /esp/
  - Added more 3-syllable (e.g., estado)
  - Added /esk/
  - Added “Es un/a ___” phrase

- Liquids
  - Word-initial /pl, bl, kl/
  - Word-initial /tɾ/
  - Short trial of Word-initial /r/
ADDITIONAL TARGETS FOR CYCLE 3

- May – August (Summer break – no therapy)
- Began Pre-K in dual-language classroom
- Assessed phonetic inventory in English

Targets:
- Liquids
- Other Consonant Clusters/Sequences
  - (e.g., word-medial CC; busco)
- Introduced target patterns in English
  - (e.g., /s/ clusters)
<table>
<thead>
<tr>
<th>Stimulus</th>
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<th>4;1</th>
<th>4;6</th>
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<tr>
<td>Árbol</td>
<td>/abo/</td>
<td>/abol/</td>
<td>/adbol/</td>
</tr>
<tr>
<td>Caballo</td>
<td>/bajo/</td>
<td>/kaßajo/</td>
<td>/kaßajo/</td>
</tr>
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<td>Estrella</td>
<td>/tɛja/</td>
<td>/ehtɛja/</td>
<td>/eštɛja/</td>
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<tr>
<td>Dientes</td>
<td>/jete/</td>
<td>/jentes/</td>
<td>/jentes/</td>
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</table>

*/s/ singleton generalized without targeting it.
## Pre-, Inter-, & Post-treatment

<table>
<thead>
<tr>
<th></th>
<th>3;5</th>
<th>4;1</th>
<th>4;6</th>
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<tbody>
<tr>
<td>Cons. Seq.</td>
<td>114%</td>
<td>71%</td>
<td>43%</td>
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<tr>
<td>Stridents</td>
<td>83%</td>
<td>41%</td>
<td>33%</td>
</tr>
<tr>
<td>Liquids</td>
<td>100%</td>
<td>42%</td>
<td>39%</td>
</tr>
<tr>
<td>TOMPD</td>
<td>185</td>
<td>81</td>
<td>50</td>
</tr>
<tr>
<td>Severity</td>
<td>Hi-Profound</td>
<td>Moderate</td>
<td>Mild</td>
</tr>
<tr>
<td>Intelligibility</td>
<td>15%</td>
<td>60%</td>
<td>78%</td>
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SPANISH VS. ENGLISH

“Juan” began learning English at 4;1

<table>
<thead>
<tr>
<th></th>
<th>Spanish</th>
<th>English*</th>
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<tr>
<td>Cons. Seq.</td>
<td>43%</td>
<td>44%</td>
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<tr>
<td>Stridents</td>
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<tr>
<td>Severity</td>
<td>Mild</td>
<td>Mild</td>
</tr>
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*Hodson Assessment of Phonological Patterns-3 (HAPP-3; 2004)

Note – English patterns were only targeted in therapy for three sessions.
SESSION RECOMMENDATIONS

- Use slight amplification (e.g., amplifier)
- Goal is close to 100% accuracy each time
  - Choose target words carefully
    - Elicit a **correct** response
    - Real words that are short in length
  - Find child’s “level” for target (hierarchy)
  - Use cues/assists/models as needed to reach goal
- Avoid selecting words containing consonant at same place of articulation as error:
  - English: Dog (/d/ for /g/)
  - Spanish: Gato (/g/ for /t/)
**ADDITIONAL SUGGESTIONS**

- Keep the child’s level of bilingualism in mind at all times
- Incorporate phonological awareness activities in therapy (e.g., nursery rhyme)
- Send home practice materials with child
  - Listening list with target pattern in word
  - Have Caregivers read list to child twice daily
- Monolingual SLPs should be familiar with what to target in both languages
COLLABORATION WITH PERSONNEL

- Classroom teacher
  - Communication and collaboration
  - Training teacher to serve as second listener
  - Using teacher “expertise” (e.g., Spanish)

- Spanish-speaking co-worker/colleague
  - Other teacher on campus
  - Secretary/aid

- Bilingual SLP staff
  - District diagnostician
  - Collaboration with monolingual SLPs


Stuttering in Languages Other than English: What do we know? What do we do?

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**CORE QUESTIONS**

- Is there a problem?
- What is the nature of that problem?
- Will it persist?
- How should I treat?
Is There a Problem?

- Little study of stg. prevalence in Bilingual Speakers (BS)
- Suspect that it is least as prevalent in BS as Monolingual Speakers (MS) (i.e., 1% of general population; 5% of children [Bloodstein & Bernstein Ratner, 2008])
- A few reports that stg. is more frequent in BS (Howell et al., 2009; Karniol, 1992)
  - Questions raised about methodologies and reported outcomes (Packman et al., 2009; Van Borsel, 2011)
Is there a problem?

- Prevalence may vary across BS subgroups (Van Borsel, 2011)
  - Age of acquisition
    - Bilingual First Language Acquisition vs. Early Second Language Acquisition vs. Later Sequential Learning
  - Language proficiency and use
  - Proximity of the two languages
Is there a problem?

- Assess fluency in both languages
  - Stuttering vs. language learning
    - Disfluencies associated with L2 learning identified as stuttering
    - Stuttering dismissed as typical disfluencies of L2 learner
  - Little evidence that stg. may affect only one language in BS (Nwoka, 1988; Van Borsel, 2011)
Can you identify stg in languages you do not speak?

- Possible but not foolproof
- Identification of stuttering may be impacted by
  - Stg. severity
  - Your knowledge about stg.
  - Your knowledge about the dialect/language and bilingualism
  - Language proximity

Van Borsel & Britto Pereira, 2005; Watson & Kayser, 1994; Bernstein Ratner, 2004
Is there a problem?
Is there a problem?

- Obtain information from the linguistic community (e.g., parent, teachers) – your “yardstick” (Anderson, 2004)
Is there a problem?

Client/Family’s View of Stuttering

- What do you think caused the stuttering [use their term]?
- What have you been told about the problem/stuttering (e.g., advice)? By whom?
- Is stuttering present in all languages spoken?
- Are there times when the stuttering is better/worse? Languages used/heard, specific situations, people topics, words, sounds / letters, times of the day, etc.?
- How do others react to the stuttering? Family members? Friends? Strangers?

Watson & Kayser, 1994; Shenker & Watson, 2009
Psychologist told me that it was due to the problems suffered during pregnancy.

His grandmother also was a stutterer.

He has trouble with his Spanish and it is difficult to express himself fluently.

Operation

Tension

When they tried to give him stitches, he fell and had to have his front teeth pulled.

Wants to talk too fast

Because of many ear and throat infections

Convulsions

**What is the nature of the problem?**

- Stg. more than likely will vary in the two languages
  - Equal stg. in balanced bilinguals (e.g., Lim et al., 2008)
  - More stg. in dominant language (e.g., Shenker et al., 1998; Carias & Ingram, 2006; Howell et al., 2004)
  - More stg. in less proficient language (e.g., Lim et al., 2008; Schäfer, 2008)
- Use parent/client severity ratings in each language and compare with your clinical opinion
Examine code-switching to determine

- Expected pattern of a BS
- Avoiding words
  - Hesitations (code-switching is usually done rapidly)
  - Less precise word
  - Explore with your client
Spanish vs. English-speaking CWDNS

**Similarities**
- No gender differences
- Variability in frequency
- Wide range of disfluency types observed, but not all children exhibit every type
- Similar proportions of SLDs (≤ 50% Eng; ~42% for Span)
- Disfluencies on or before function words

**Differences**
- Total disfluency exceeded many CWS freq. in Span
- Did not see freq decrease in 3 and 5 year olds reported for Eng CWDNS
- Many multisyllabic word repetitions in Span
- Disfluencies on both vowel and consonant initiated words in Span

Carlo & Watson, 2003; Watson & Anderson, 2001; Watson et al, 2011a, Watson et al., 2011b
**Spanish vs. English-Speaking CWS**

### Similarities
- Wide range of disfluency types observed, but not all children exhibit every type
- Similar proportions of SLDs (I>65% Eng; ~70% for Span)
- Stg on function words with exchange relation reported by some (observed by some)
- Stg on or prior to sent/clause initiation
- Stg on initial phoneme of word
- Increased stg related to increased syntactical complexity and length

### Differences
- Many multisyllabic word repetitions in Span
- More stg. on monosyllabic words rather than longer words
- Stg. on both vowel and consonant initiated words in Span
- When compared with younger children, older CWS stuttered more on
  - Words within a clause
  - Positions other than the initial position of words

Carlo & Watson, 2003; Watson & Anderson, 2001; Watson et al, 2011a Watson et al., 2011b; Au-Yeuang et al., 1998; Howell et al., 2004
AFFECTIVE, COGNITIVE & BEHAVIORAL ISSUES

Head: Cognitive

Heart: Affective

Speech: Behavior
VIEWING BEHAVIORS THROUGH CULTURAL OR STUTTERING LENSES

- Child is quiet.
- Child does not have many friends.
- Child observes and does not participate in activities.
- Child does not look at the teacher.
- Child does not ask questions or volunteer information.

- Socially withdrawn and inhibited due to his stuttering.
- Loss of eye contact; more advanced stuttering.
- Speech avoidance due to stuttering fears.

- Child does not defend himself.
- Child hits other children.
- Child does not talk back.
- Child will not make a choice.
- Child waits for teacher’s directions rather than making a choice.
- Child doesn’t know what to do when not told.
- Does not know how to handle teasing and bullying related to stuttering.
- Does not understand the notion of having choices in his speech.
- Lacks independence – may not be able to self-monitor.
- Won’t be able to problem solve when needed.

WILL STUTTERING PERSIST?

- No epidemiological or longitudinal studies to provide prognostic guidelines for stuttering recovery in bilingual children
- Be cautious about depending on what we know about monolingual, English-speaking children who stutter
No empirical support for eliminating one of the two languages to eliminate/reduce stuttering (Shenker & Watson, 2009; Shenker, 2011; Van Borsel, 2011)

- No evidence to date to justify asking a child to become “monolingual”
Outcomes of Treatment of Bilingual Speakers who Stutter

- Primarily based on Lidcombe and speech restructuring treatment approaches
  - No systematic study of approaches that affective and cognitive components
- Mostly case studies with some retrospective studies
- Include a variety of languages (see Shenker, 2011)
As positive as monolingual speaker outcomes (e.g., Druce et al., 1997)

Did not require more time

Can improve fluency when maintaining bilingual language environment (Shenker, 1998)

See Lim & Lincoln (2011) & Shenker (2011) for reviews.
Fluency improved in both languages regardless of whether the treatment was in one or both languages (Lim & Lincoln, 2011; Rousseau et al., 2005; Shenker, 2011)

Early (simultaneous) vs. Later (sequential) learners (Lim & Lincoln, 2011)
- Improvement for both
- No differences in amount of time when compared with MS
- No negative impacts on language development
Greater improvements in dominant language (Lim et al., 2008)
- For both English-dominant and Mandarin-dominant AWS
- Whether or not this language was the language of treatment
Evidence Based Practice: A Collaborative Process

EBP

Current Best Evidence

Clinical Expertise

Client/Patient Values

ASHA, 2011.
HOW SHOULD I TREAT?

CULTURAL & LINGUISTIC CONSIDERATIONS

- Goal-setting
- Targets
- Therapy activities and procedures
- Prompts and models
- Feedback, including nature and frequency of praise
- Therapy materials
- Activities within and outside of therapy room
- Scheduling
- Family involvement

Speech Modifications

- Stuttering modifications (e.g., pull outs, easy repetitions)
- Fluency enhancers (e.g., easy onsets, rate reduction, blending, phrasing)
- Could you use? Impact on meaning / communication
- Would you use?: Appropriateness
  - Consider a range of contexts and language use
- Developing hierarchies through modifying length and complexity (e.g., Watson et al., 2008; Watson et al., 2009; Watson et al., 2011)
**How should I treat?**

**Cultural & Linguistic Considerations**

- Consider range of partners and stimuli sources
  - Enlist client and family help
- Monitor progress in both languages
- Practice in varied linguistic environments
  - Understand where and with whom languages are used - use for developing hierarchies
Where is each language used/heard?

- At home with family
  - Older siblings vs. others
- With extended family
- In school
- At home with roommates
- For hobbies/sports
- Reading newspapers/books/magazines
WHERE IS EACH LANGUAGE USED?,

- Religious community activities
- Watching TV/movies
- Internet/computer use
- Listening to the radio
- Social life/friends/family friends/relatives
- Shopping
- Others?

Shenker & Watson, 2009
How should I treat?

Cultural & Linguistic Considerations

- Support communication across languages and environments
- Directly address beliefs and feelings about speech, stuttering, communication and bilingualism
- Check in regularly to monitor generalization
FINDING A BALANCE

- Understanding the person and the cultural group/community
- Incorporating functional equivalents and practices from within the culture
- Acknowledging the “extraordinary”
  - The importance of rationales

See Johnston & Wong, 2002.
CALL FOR COLLABORATION

- Developing partnerships: Clinicians, clients/families, and researchers
- Enhancing our understanding of stuttering in other languages
- Providing treatment that meets individual needs
CURRENT TRENDS IN THE ASSESSMENT AND TREATMENT OF SPANISH-SPEAKER AND BILINGUALS WITH ANOMIA

Maria L. Muñoz, PhD, CCC/SLP
Texas Christian University
ANOMIA
PARAPHASIAS

- Phonological
- Semantic
- Circumlocutions
- Visual
- Neologism
- Mixed Semantic-phonological
- Unrelated

**Semantic Paraphasias**

- **Semantic paraphasias**
- **Morphemic verbal paraphasia**

  - GATO
  - PERRO
  - ANIMAL

  - NOCHEMENDE (night + -ly)
  - MALMANO (bad- +hand)

---

Ardila, Montanes, Caro, Delgado, and Buckingham (1998)
PHONOLOGICAL PARAPHASIAS: SPANISH

Uncommon processes
- Vocalic changes
  - < 10% for Broca’s
  - < 25% for Wernicke’s and conduction
- Voicing changes

Common processes
- Changes in manner of articulation
  - Tenedor → tedendor
- Changes in place of articulation
  - Bosina → gosina

Ardila, Montanes, Caro, Delgado, and Buckingham (1998)
Assessment
An assessment of naming should provide information regarding:

- naming accuracy
- patterns of strengths and weaknesses
- types of errors produced
- responsiveness to cuing (Raymer & Gonzalez Rothi, 2008).
ASSESSMENT TOOLS

- Confrontation Naming
- Naming Tasks
- Semantic/Phonological Tasks
CONFRONTATION NAMING

- Boston Naming Test
- Variations on the BNT
BOSTON NAMING TEST

- 15, 60 item version
  - Accuracy
  - responsiveness to phonemic cues
  - types of errors
  - recognition
- Available in English and Spanish as part of the BDAE 3
  - Spanish version is primarily a translation of the English version, 5 items differ.
Order of item difficulty varies

- in English for Spanish-English bilinguals (Kohnert et al., 1998) and
- for monolingual Spanish speakers (Allegri et al., 1997).
  - Allegri et al., (1997) suggest a revised item order to reflect item difficulty in Spanish
  - Allegri et al., (1997) suggest alternate cut-off scores for Spanish speakers based on education. The authors note that accuracy on items numbered 41 and above was particularly influenced by education.
English Item Analysis

Spanish Item Analysis

Modified BNT for Spanish speakers (MBNTS)

- developed by asking expert judges to rate the original 60 items on appropriateness and difficulty (Ponton et al., 1992).

- 30 of the most appropriate items and re-ordered them according to rated difficulty (easy to hard).
SPANISH NAMING TEST

- 15 items ordered according to item difficulty. (Ardila, Roselli, & Puente, 1994)
  - 6 items from BNT, 9 items selected specifically for Spanish speakers
- Sampled 346 Spanish speakers and provide norms stratified by age and education.
NESS ( Ardila, 1994)

Subtests:
- MMSE
- Cancellation
- Naming, Writing, Reading, Repetition
- Phonological discrimination
- Grammar
- Token Test
- Verbal fluency
- Mental calculation
- Verbal learning (memory)
- Facial Memory
- Rey Osterrith Figure

www.amazon.com
30 item naming test designed specifically for Spanish speakers (Marquez de la Plata et al., 2008).

Naming accuracy on the TNT discriminated effectively between groups of participants with and without dementia, though effects of age, education, and acculturation were evident.
A test of English naming ability in bilingual (Spanish/English) individuals with varying degrees of proficiency in English (Casas, Calamia, & Tranel, 2008).

- 51 items
  - 21 cognates
  - 30 non-cognates
NAMING TASKS

- **IPNP Stimuli**
  - [http://crl.ucsd.edu/~aszekely/ipnp/1stimuli.html](http://crl.ucsd.edu/~aszekely/ipnp/1stimuli.html)
  - Picture stimuli and related norms in seven languages
  - 520 drawings of objects, 275 actions
    - norms for age of acquisition, frequency, familiarity, goodness of depiction, and visual complexity.
    - Smaller corpus available to the public
Picture pool for oral naming (PEDOI).

- 269 Pictures from a variety of semantic categories standardized in eight European languages, Canadian French, and Latin-American Spanish (Kremin et al., 2003).

- name agreement, visual complexity, familiarity, imageability, and age of acquisition
NAMING SUBTEST

- CLQT- 10 items
- Multilingual Aphasia Test- 30 items
- Bilingual Aphasia Test- 20 Items
- Subtest 51 of the Evaluación del Procesamiento Lingüístico en la Afasia (EPLA; Kay, Lesser, & Coltheart, 1995)
Cognitive Linguistic Quick Test

**Confrontation Naming**

**Directions:** Say, “Ahora, quiero que menciones los nombres de algunos dibujos”. Turn to page 1 of the Stimulus Manual and present the first picture and say “¿Qué es esto?” Then present the remaining pictures (pages 2–10). You may say “¿Qué es esto?” or “¿Qué es?” as you present each picture.

**Prompts:** If the examinee gives a single-syllable word (e.g., corolla/sfondo), ask for the common name. If the examinee gives an elaborated response (e.g., plátano con piel), ask for the single word. Do not provide additional prompts or probes.

**Recording and Scoring:** Record incorrect responses verbatim. Circle 1 point for a correct response, an acceptable variation of a correct response, a dialectal variation, or a commonly accepted synonym for the stimulus. Circle ½ point if the examinee produces at least half of the phonemes or syllables correctly. Give no credit for responses that have less than half of the phonemes or syllables correct. Circle one or more of the descriptions if applicable.

### TABLE

<table>
<thead>
<tr>
<th>Item</th>
<th>Response</th>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vaca</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>sillahassento</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>aceite/sintaino</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>martillo</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>corbeta/azur</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>trenferrosaur</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>gallina/yello/gallo</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>platanos/platano/ganado</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>onisa</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
<tr>
<td>riper/cierra/religioso/crosilla</td>
<td>1 ½</td>
<td>0</td>
<td>5D SC P UN NR</td>
</tr>
</tbody>
</table>

**Clinician’s Note**

Difficulties in confrontation naming are a key symptom of aphasia that can result from various forms of brain damage (e.g., stroke, head injury, dementia, tumors, infections). Delayed responses suggest mild word-finding problems. Note immediate or delayed perseverations (repeated responses) of all or part of a previous word. Although no points are deducted, an elaborated response may be symptomatic of novelty or difficulty in naming. Ask the examinee to give a single-word response. Use of syllabified words may be a symptom of word-finding problems. Repeated “common names.” The type of errors examination may guide treatment of word-finding problems. See Chapter 6 in the Examiner’s Manual for various types of naming errors that may provide differential diagnostic information.
### Hoja de RESUMEN

- **Nombre:** 
- **Número:** 
- **Fecha:** 
- **Edad:** 
- **Sexo:** 
- **Dominancia Manual:** 
- **Examinador:**

<table>
<thead>
<tr>
<th>Artículo de estimulo</th>
<th>Respuesta (anote literalmente)</th>
<th>Tiempo (segundos)</th>
<th>Puntuación (Respuesta correcta=2pts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Elefante</td>
<td></td>
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</tr>
<tr>
<td>2. Oreja</td>
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<td></td>
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<tr>
<td>3. Trompa</td>
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<td>4. Colmillo</td>
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<td>5. Tobillo</td>
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<tr>
<td>6. Pantorrilla</td>
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<td>7. Espinilla</td>
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<td>8. Empeine</td>
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<td>9. Cruz</td>
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<tr>
<td>10. Elipse</td>
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<tr>
<td>11. Semicírculo</td>
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<tr>
<td>12. Hexágono</td>
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<tr>
<td>13. Circulo</td>
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<tr>
<td>14. Triángulo</td>
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<tr>
<td>15. Rectángulo</td>
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<td>16. Piano</td>
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<tr>
<td>17. Tecla</td>
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<tr>
<td>18. Pedales</td>
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<tr>
<td>19. Isla</td>
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<tr>
<td>20. Bahia</td>
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<td></td>
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<tr>
<td>21. Península</td>
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<td></td>
<td></td>
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<tr>
<td>22. Carta</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>23. Sello</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>24. Matasellos</td>
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<tr>
<td>25. Tenedor</td>
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<tr>
<td>26. Mango</td>
<td></td>
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<tr>
<td>27. Dientes</td>
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<td>28. Teléfono</td>
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<tr>
<td>29. Disco</td>
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<td>30. Pinzas</td>
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<table>
<thead>
<tr>
<th>Ajuste de educación</th>
<th>Puntuación cruda</th>
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<tr>
<td>&lt;9 años==8pts</td>
<td>+</td>
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<tr>
<td>9-11 años==6pts</td>
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<tr>
<td>12-13 años==4pts</td>
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</tr>
<tr>
<td>14-15 años==2pts</td>
<td></td>
</tr>
<tr>
<td>≥16 años==0pts</td>
<td></td>
</tr>
</tbody>
</table>
THE BILINGUAL APHASIA TEST

The Assessment of Bilingual Aphasia

By Michel Paradis, Gary Libben

Price: Free download

Pages: 264

Published by: Psychology Press (formerly published by Lawrence Erlbaum Associates)

Publication Date: 1st April 1987

BAT Part B: English

O.K., now words that begin with "F"
265. All words begin with right sound?
   + - 0 (265)
266. Number of acceptable words?
   (266)

O.K., now words that begin with "K"
267. All words begin with the right sound?
   + - 0 (267)
268. Number of acceptable words?
   (268)

*** In the following section the patient is required to name the objects shown to him/her. Hold each object up so the patient can easily see it. The objects should be out of the patient's right before they are presented.

*** Begin reading aloud here.

I will show you some things. Tell me what the thing is called. Ready?
269. Book
   + - 0 (269)
270. Glasses
   + - 0 (270)
271. Key
   + - 0 (271)
272. Cup
   + - 0 (272)
273. Tie
   + - 0 (273)
274. Soakers
   + - 0 (274)
275. Spoon
   + - 0 (275)
276. Glove
   + - 0 (276)
277. Pencil
   + - 0 (277)
278. (Playing) card
   + - 0 (278)
279. Thermometer
   + - 0 (279)
280. Button
   + - 0 (280)
281. Cigarette
   + - 0 (281)
282. Fork
   + - 0 (282)
283. Feather
   + - 0 (283)
284. Ring
   + - 0 (284)
285. Candle
   + - 0 (285)
286. Envelope
   + - 0 (286)
287. Toothbrush
   + - 0 (287)
288. Watch
   + - 0 (288)

SENTENCE CONSTRUCTION

*** In this section the patient must create a sentence using the words that you will read to him. For each sentence to be created you should note: 1) whether the patient responds at all; 2) whether the sentence is a correct English sentence; 3) whether the sentence makes sense; 4) whether he/she has used all the words that were read to him/her. Finally, 5) the number of words in the sentence should also be recorded.

*** Begin reading aloud here.

I will give you some words. With these words make the simplest and shortest sentence possible. So, for example, if I give you the words: door, open, nurse; you try to make a simple sentence that uses all the words, like: "The nurse opens the door."
289. Housecat
   Response obtained? + - 0 (289)
   Correct English sentence? + - - (290)
   Does it make sense? + - - (291)
   Number of stimulus words used? + - - (292)
   Total number of words? + - - (293)

*** In the following three sections the patient is required to provide an oral response to the stimulus. For each item the most probable correct response has been given on the right hand side. If the patient produces exactly that response then simply circle "+" and "GO ON TO THE NEXT ITEM." If, however, he/she produces some other response, write that response in the space provided and circle "-" if it is incorrect. Criteria for correctness will be given for each section. Again, if the patient produces no response within five seconds then circle '-' and go on.

294. Chair/Doctor/hisl
   Response obtained?
   Correct English sentence?
   Does it make sense?
   Number of stimulus words used?
   Total number of words?

295. Desk/open/drawer
   Response obtained?
   Correct English sentence?
   Does it make sense?
   Number of stimulus words used?
   Total number of words?

296. Time/green/tea/gun
   Response obtained?
   Correct English sentence?
   Does it make sense?
   Number of stimulus words used?
   Total number of words?

297. Pencil/write/blue/paper
   Response obtained?
   Correct English sentence?
   Does it make sense?
   Number of stimulus words used?
   Total number of words?

*** In the following section the patient is required to respond with a word that means the opposite of the stimulus word. The response is correct if its meaning is opposite to, but is not morphologically related to the stimulus word. So, in this section, given the stimulus "TRUE," the response "UNTRUE" would be scored wrong (by circling "-"), because "untrue" meaning the opposite of the stimulus, it is not a DIFFERENT word.

*** Begin reading aloud here.

I will give you a word. You give me a different word that has the opposite meaning. So, for example, if I say "BIG" you would say "SMALL" because "big" and "small" have opposite meanings. Ready?
314. TRUE
   + FALSE or ______ 1 - 0 (314)
315. WIDE
   + NARROW or ______ 1 - 0 (315)
316. POOR
   + RICH or ______ 1 - 0 (316)
317. SLOW
   + FAST or ______ 1 - 0 (317)
318. TALL
   + SHORT or ______ 1 - 0 (318)
319. SHUT
   + OPEN or ______ 1 - 0 (319)
320. HEAVY
   + LIGHT or ______ 1 - 0 (320)
321. HIGH
   + LOW or ______ 1 - 0 (321)
322. SOFT
   + HARD or ______ 1 - 0 (322)
323. THICK
   + THIN or ______ 1 - 0 (323)

DERIVATIONAL MORPHOLOGY

*** In the following section, if the patient produces the target word (given to the right) then simply circle "+" and go on. If, however, the patient produces some other response, then score it correct by circling "1" and write it in the space provided only if it is morphologically related to the stimulus and makes sense in the frame: "The ___ man."
Generative Naming Tasks

- Verbal Fluency Task
  - Multilingual Aphasia Test
    - calculation of percentile ranks and interpretations for each rank in the English and Spanish versions
  - The Neuropsychological Evaluation of Spanish speakers
    - provides norms for phonological and semantic category generation stratified by age and education
A variety of semantic and phonological tasks can be chosen to
- Identify strengths and weaknesses
- Hypothesize the nature of the impairment to guide treatment
The Spanish version PALPA (Psycholinguistic Assessment of Language Processing in Aphasia). La *Evaluación de Procesamiento Lingüístico en la Afasia* (EPLA; Lesser & Colthear, 1995 traducido por Valle y Cuetos) is a collection of 58 tasks that can be used to assess:

- Phonological processing
- Reading and writing
- Comprehension of pictures and words
- Sentence comprehension.
WORD TO PICTURE MATCHING

1. zanahoria

EPLA: 45
# Semantic Associations

<table>
<thead>
<tr>
<th></th>
<th>Niebla</th>
<th>Bruma</th>
<th>Vapor</th>
<th>Pestillo</th>
<th>Cerradura</th>
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<tbody>
<tr>
<td>1</td>
<td>Niebla</td>
<td>Bruma</td>
<td>Vapor</td>
<td>Pestillo</td>
<td>Cerradura</td>
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<tr>
<td>2</td>
<td>Horno</td>
<td>Jabón</td>
<td>Nevera</td>
<td>Estufa</td>
<td>Cera</td>
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<tr>
<td>3</td>
<td>Choza</td>
<td>Gorra</td>
<td>Casa</td>
<td>Sombrero</td>
<td>Cabaña</td>
</tr>
</tbody>
</table>
Decisión léxica visual:
no-palabras ilegales

- Jineta
- Capellán
- Shampoo
- Hwcitole
- jbstama

EPLA: 24

Decisión léxica visual:
imaginabilidad y frecuencia

- Cuadro
- Hospitel
- Pereza
- fueco

EPLA: 26
Rhyme Judgment

- Versión auditiva
  - Sol-col
  - Pan-don
  - Flor-sor
  - Ágil-frágil
  - Groso-graso

- Versión pictórica

EPLA 15

EPLA 14
Pre-morbid proficiency in L1 and L2 will be impacted
- Accuracy
- Comprehension v. expression

May need to assess interactions between languages
- Translation
- Code-switching
TRADUCCION DE PALABRAS/TRANSLATION OF WORDS

*** Lea en voz alta una por una las siguientes palabras. Si la respuesta del paciente es la palabra que se encuentra entre paréntesis, marque con un círculo el signo "+". Si la respuesta es diferente a esta palabra pero aceptable, rodee con un círculo el número "1". Si la traducción es incorrecta, marque con un círculo el signo "-". Si el paciente no da ninguna respuesta después de cinco segundos, marque con el "0" y continúe con la siguiente palabra.

*** Comience a leer a partir de aquí.
Le voy a decir unas palabras en Español y usted me dará su traducción al Inglés. ¿De acuerdo?

438. Cuchillo (knife) + 1 - 0 (438)
439. Puerta (door) + 1 - 0 (439)
440. Cepa (beer) + 1 - 0 (440)
441. Arena (sand) + 1 - 0 (441)
442. Rodilla (knee) + 1 - 0 (442)
443. Amor (love) + 1 - 0 (443)
444. Felicidad (happiness) + 1 - 0 (444)
445. Temor (fear) + 1 - 0 (445)
446. Tristeza (sadness) + 1 - 0 (446)
447. Razón (reason) + 1 - 0 (447)

*** Read aloud the following words, one at a time. If the patient's answer is the word in parentheses, circle "+"; if the word is different but acceptable, circle "1"; if the translation is incorrect circle "-". If the patient has given no answer after five seconds, circle "0" and read the next word.

*** Begin reading aloud here.

I am going to say a word in English and you will give me its Spanish translation. Are you ready?

448. Fork (tenedor) + 1 - 0 (448)
449. Napkin (servilleta) + 1 - 0 (449)
450. Bed (cama) + 1 - 0 (450)
451. Mirror (espejo) + 1 - 0 (451)
452. Shadow (sombra) + 1 - 0 (452)
453. Hair (cabello) + 1 - 0 (453)
454. Tooth (diente) + 1 - 0 (454)
455. Bottle (botella) + 1 - 0 (455)
456. Scissors (tijeras) + 1 - 0 (456)
457. Trip (viaje) + 1 - 0 (457)

TRADUCCION DE ORACIONES/TRANSLATION OF SENTENCES

*** Lea al paciente las oraciones en voz alta hasta un máximo de tres veces según se requiera, y marque con un círculo la cifra correspondiente al número de veces que el texto haya sido leído. La calificación corresponde al número de palabras correctamente traducidas; la traducción se sugiere entre paréntesis. La traducción hecha por el paciente se debe grabar. Marque con un círculo el número "3" si la traducción corresponde exactamente a la sugerida; "2" si solamente dos grupos de palabras son correctos, "1" si solamente un grupo de palabras es correcto; y "0" si todos los grupos son incorrectos, o el paciente no presenta respuesta alguna después de tres repeticiones consecutivas. Si la traducción del paciente no es la sugerida pero aceptable, rodee con un círculo el signo "+".

*** Comience a leer en voz alta a partir de aquí.

Ahora le voy a leer algunas frases en Español. Usted las traducirá al Inglés. ¿Listo?
ASSessment: Summary

- For bilinguals, naming should be assessed in L1 and L2.
- Choose tasks that account for structural and experiential differences in L1 and L2.
- There are a variety of tasks that have been developed for use with Spanish speakers, that are comparable to existing English protocols.
Modifying existing treatments for use with clients who are bilingual or non-English speaking.
Anecdotal evidence suggests familiar treatments can be effective in languages other than English.

Wiener, Obler, & Sarno (1995) found that 55 bilinguals demonstrated equivalent recovery to monolinguals.
MODIFYING EXISTING TREATMENTS

- Consider the specific features of each language.
- Consider what cues are important in that language.
MODIFYING EXISTING TREATMENTS: SFA

Boyle and Coelho (1995)
Edmonds and Kiran (2005)

1. The ________________ is ____________________.

2. I ________________ the _________________.

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Group

Use

Action

Target Item

Properties

location

Association

Has/is ________________

Is found in ______

Reminds me of ___
Beeson and Hillis (2001)
NAMING AND CUEING HIERARCHY

1. Cow
2. En animal que vive en la granja
3. V--

1. Vaca
2. Animal that says moo
3. C--

- Spanish (L1)
  - Phonemic
  - Semantic
  - Translation

- English (L2)
  - Translation
  - Phonemic
  - Semantic

(Bond and Hein, 1985)
Promote generalization by targeting stimuli or skills that cross languages.
PROMOTING TRANSFER OF TREATMENT OUTCOMES BETWEEN LANGUAGES.
TREATING IN ONE OR BOTH LANGUAGES: TRANSFER OF SKILLS

- Transfer may relate to type of aphasia and/or modality being treated

- Transfer may be unidirectional
  - Lang B → Lang A
  - **NOT** Lang A → Lang B

Watamori & Sasanuma, 1976 & 1978
Edmonds and Kiran (2005)
Hinkley (2003)
Transfer may occur for words that are similar between languages.

- Cognates
- Degree of shared meaning

Kohnert, 2004; Edmonds and Kiran, 2005
TREATING IN ONE OR BOTH LANGUAGES:  

TRANSFER OF SKILLS

- Transfer may be influenced by pre-morbid proficiency
- Targeting underlying cognitive deficits may result in improved language skill in both languages, regardless of language of treatment
SUMMARY AND CONCLUSIONS

- Anomia in aphasia
- Current trends in the assessment and treatment of Spanish-speaker and bilinguals across the lifespan
QUESTIONS AND ANSWERS