Children who stutter: Bilingual Issues in Assessment & Treatment

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Why are you here?

Expectations from this session?

Why consider cultural & linguistic diversity in children who stutter?

- 50-70% SA children in Canada's largest cities are children of immigrants
- 300,000 (7%) of all SA children in Canada are in some form of French immersion
- Immigrant population is 19.8% of total
- 1/5 under 14 years old
- 20% of the Canadian population speak a home language other than English/French
Bilingual Population

- Immigrants to Canada come from 200+ countries speaking 150 different languages
- 4/5 are allophones (those whose mother tongue is neither of Canada’s official languages)

10 most frequent languages

- Chinese
- Italian
- German
- Punjabi
- Spanish
- Arabic
- Tagalog
- Portuguese
- Polish
- Urdu

You will see these children!
Some issues related to bilingualism/stuttering

- Identifying stuttering in an unfamiliar language
- Evaluating linguistic proficiency
- Adjusting treatment to account for cultural beliefs & expectations
- Evidence-based treatment

1. Identifying Stuttering in an unfamiliar language

- Few guidelines
- Stuttering can vary across languages
- Different patterns are likely in children
- Most research on bilingual adults

Einarsdottir & Ingham, 2009

- SLPs unfamiliar with language
- Reliable at identifying stuttering in 3-5 year old children
- Consensus agreement
- Rate in short intervals
Tsai, Lim, Brundage, Bernstein Ratner (2011)

- Provide examples of disfluency loci across major languages
- Child Language Data Exchange System (CHILDES)
- http://childes.psy.cmu.edu

Stuttering in an unfamiliar language

Can you pick out the unambiguous stutters?

2. Language Proficiency: Bilingual Children

- May have uneven development across languages spoken
- May have increased ambiguous disfluencies
- Over-identification of stuttering may result
- Delayed language may be misdiagnosed
Bilingual children:

- May change word order to preserve a grammatical rule of the stronger language
- May code mix vocabulary of two languages
- Not indicative of a speech avoidance or word retrieval problem

Evaluation of Linguistic Proficiency

- Use interpreters who can confirm proficiency
- Detailed language history
  - First exposure to each language
  - Course of language acquisition for each language
  - Other speech/language concerns
  - Where is each language used
  - Use perceptual rating scale for each language modality

Example

<table>
<thead>
<tr>
<th>Language</th>
<th>Proficiency/speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
</tr>
<tr>
<td>L1______</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>L2______</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>L3______</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Other____</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
</tbody>
</table>
Conversational Sample languages spoken

- Note disfluencies that could be related to reduced or developing proficiency
- Include relevant, age-appropriate tasks including conversation, monologue, story retell, reading, picture identification
- Probe increasing complexity
- Compare to established benchmarks

3. Belief systems

1 piece of advice you have heard about stuttering that reflects cultural beliefs?

Parent beliefs

Waheed-Kahn (1997)

- Parents coped with stuttering by:
  - Praying for change
  - Telling their children to speak properly
  - Completing their sentences
  - Changing the environment; sending them to live with someone else
  - Asking them not to talk in public
Cultural Diversity: Implications for Stuttering

- Adds another dimension of complexity
- Children are coping with psychosocial issues
- Placed in novel situations
- Introduction to a new language in school
- Exposure to mixed linguistic input

To support our clients

- Need to view bilingualism with a new lens
- Not as a problem
- Understand cultural beliefs and practices

Retelling family stories

- Encourages parents to identify hopes & concerns for treatment of stuttering
- Consequences of losing 1st language, e.g., loss of cultural identity, values, beliefs, communication with grandparents
Retelling family stories

- Values traditions, lifestyle practices, & linguistic heritage
- Will have positive impact on treatment
- Allows for assessment of pragmatic behaviors that may be culturally determined
- Rules for eye contact
- How children are praised
- Facial expressions, gestures that replace verbal comments

Establish role of family in treatment

- Who will bring child to therapy?
- Who will be the model in beyond clinic setting?
- Other family members included in treatment?
- What attitudes may impact treatment outcome?

Bilingualism

- Does not mean speaking 2 languages perfectly
- Case descriptions
David, a 4-year-old child with severe stuttering, presented at the clinic. David’s mother always speaks to him in French, while his father speaks to him in English. David speaks to his parents in both languages, and sometimes mixes the two during one utterance, using a word that he does not know in one language, or to extend the length of a sentence. An example of this might be “on est allé à la plage” (we took the bus) or “not all this one en premier” (for put all this one first). He will begin his education in a school where he will study in English and French and be introduced to a third language. His parents want to know if this educational plan is a good idea, considering David’s severe stuttering.

Emma, a 4-year-old English speaking preschooler, who has stuttered for 1-½ years and has a history of persistent stuttering in her family, will begin her education in a school where early French immersion is taught. Unobtrusive stuttering is characterized by sound and syllable repetitions of 2-5 locations per moment, audible sound prolongations and inadequate blocks. Until 3rd grade she will only receive a few hours a week of education in English. Up until this time she has had no introduction to French and English is spoken at home. Her parents wonder if this will exacerbate her stuttering and wonder if they should consider an English-only education.

Rama, a 3½ year old, presents with stuttering that is mostly characterized by multiple frequent sound and syllable repetitions mixed in both her home language and second language. While the home language is Arabic, Rama attends a French Kindergarten as the language of education. Neither parent is proficient in French and Rama’s mother speaks only Arabic. When using a second language, Rama’s father speaks to English. However, they prefer to converse in Arabic at home. Rama is learning French as a second language in a school where no English is spoken. Rama’s parents have been advised by the Speech Language Pathologist to speak French at home in order to increase Rama’s exposure to the language in which she will be educated, and that learning one language will be hard enough given the stuttering concerns. Is this a possible or realistic recommendation for this family?
4. Treatment of Stuttering in bilingual children

What evidence do we have?

Eliminate one language
Karniol 1992

- Case study – English/Hebrew/Hungarian
- Stuttering onset 2;1
- Hebrew only > stuttering disappeared
- No details of stuttering
- Is this a case of natural recovery
- Guttmann & Shenker (2006) – 4 bilingual preschoolers

Does fluency treated in L1 language generalize to L2?

Humphrey et al 2001
- 11-year old twins
- English/Arabic
- Treated in Arabic
- Fluency increased in Arabic reading & transferred to English

Debney & Druce 1988
- Intensive fluency shaping
- No difference between bilingual/unilingual children in treatment outcome
Using parents to provide treatment (Waheed-Kahn, 1996)

- When family members:
  - Attended therapy
  - Learned treatment targets
  - Reviewed lessons with child
  - Modeled treatment targets at home
  - Provided culturally appropriate materials
  - Assisted in development of home program

Outcomes improved

Lidcombe Program: A viable treatment for Bilinguals

Onslow, Packman, Harrison (2001)

- Behavioral treatment
- Parents provide verbal comments
- Weekly clinic visits under guidance of SLP
- Parents provide perceptual severity ratings to track progress
- Can be easily adjusted for bilingual children

Case Studies

**Shenker et al 1997**
- 3 year old
- Treatment first in L1(E)
- L2(F) added at week 23
- 13.5%SS to 2.8%SS (L1)
- 9.9 – 4.4% (L2)
- SR: 7.3-4

**Roberts & Shenker 2007**
- 3.11 year old
- Stuttering onset > 18 months
- Pre-treatment 5.6-9.8% (L1-2)
- 15 sessions in 23 weeks to Stage 2
- <1%SS 88 weeks after discharge
Case Studies

Harrison, Kingston, & Shenker (2010)
- 5 year old
- Treatment in 2 languages
- Pre-tx – 3.8-12% SS
- 8 sessions in 12 weeks to Stage 2
- Post-tx – 0.4-1.4% SS

Rousseau (2005)
- 7 year old
- Treated in French only
- Pre-treatment 2-6% (L1,2)
- 41 visits over 51 weeks to Stage 2
- Post-tx – <1% SS

Case Studies

Bakhtiar & Packman (2009)
- 8;11 male
- Baluchi and Persian
- 12 sessions over 13 weeks
- Maintained for 10 months
- Baluchi at home; Persian in clinic

Treatment Outcomes: Bilingual Children

- Findlay & Shenker (CASLPA 2011)
  - Median treatment time
    - 12 sessions to Stage 2
  - Consistent with benchmarks for monolingual children
Case History

- Age at onset of treatment – 5.0
- Stuttering onset - 3 years
- L1 = English/French; L2 = Hebrew
- Temperament – sensitive but warms up quickly
- Expressive Language – WNL at assessment (French less complex development)
- Family History – recovered (older sister, mother)

Case History, cont.

- Previous treatment – none
- Awareness – initially aware/unconcerned; recent increase in frustration; some abandonment of speaking, e.g., ‘I can't say it’.
- Parent feedback – ‘slow down’, ‘take a breath’ when stuttering increases

Objective

- **Referring SLP** – “severe disfluent speech with a high frequency of prolongations, blocks and first sound and syllable repetition”…some “secondary characteristics related to tension/ anxiety…volume rises noticeably, loss of eye contact, turning of his head & neck to release a word…breathing becomes rapid & audible, turning to panting
Objective

- Speech - frontal lisp & fricatives substituted for sibilants
- IC (pre-treatment) – 3%SS; SR=3
- BC – 12%SS; SR – 7
- poor eye contact
- Expectation of Treatment – will respond to intervention and achieve standard LP Stage 2 criteria

Treatment

- Stage 1 – visits 1-3 before holiday
  - Introduced SR
  - parents are reliable in verbal comments
  - Treatment provided in both English/French
  - Verbal contingencies for SFS introduced in structured speaking conversations
  - First telephone call (SR=2-3)
  - 2%SS on taped sample
  - Initiating some spontaneous self corrections; less effort; more whole word, phrase reps.

Stage 2

- Meets criteria in 8 visits over 12 weeks in both languages
- Did not meet criteria for Stage 2 at first visit and subsequent 4 visits (5%SS; SR=4)
- Parents resumed daily structured treatment conversations, mother trained to do ST measure
- Discharged from Stage 2 after 12 months at 0%SS; SR =1
What parents liked best about the treatment:

- Being part of the solution for their son’s stuttering
- Welcomed the opportunity to actively participate in treatment and gave high priority to attending sessions
- Both were able to develop excellent problem solving and observational skills

Adjustments to traditional treatment

- Culturally appropriate stimuli
- Modified instructions to accommodate second language of the parent
- Use audio/video exemplars in home language of child
- Provide opportunities for practicing fluency in relevant contexts/activities
Conclusion

- More clinical studies with larger numbers of children
- Compare languages with different structures
- Early and later bilingualism
- Bilingualism is not a ‘problem’
- Important to assess in all languages the child speaks
- Treatment is a collaboration between SLP & parent
- Both stutterers and bilinguals are heterogeneous populations

Questions and discussion

Thank you!
References


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Bilingualism and Stuttering

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