Stuttering and Bilingualism: Issues of Assessment in Children and Adults

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OVERVIEW

- The purpose of this short presentation is to review studies evaluating the ability of speech-language pathologists to identify stuttering in non-native languages.
OVERVIEW

- With increasing movement of people from one country and region to another, the world is becoming more globalized.
- With increased migration, there are now many people living in places where they do not speak the first language of the country.
- Hence, it is not uncommon for a SLPs to be called to assess a person who stutter who does not speak the dominant language of the SLP.
- This situation can pose problematic for the SLP. Can an SLP adequately assess stuttering in an individual who speaks a different language?
Studies with Children

• Einarsdóttir & Ingham (2009) were the first to report on the identification of stuttering in preschoolers by judges who speak a different language.
  – 10 Icelandic SLPs and 10 US SLPs watched 9 audiovisual speech samples of Icelandic stuttering preschoolers. The judges rated each 5-second interval of speech as “stuttered” or “nonstuttered.” There was a high level of agreement between the groups.
  – The authors concluded that “language familiarity is probably not a prerequisite for recognizing its occurrence” (p. 776).
Studies with Children

• The members of the IALP Fluency Committee (Bosshardt, Packman, Blomgren, et. al, in preparation) recently conducted a study further evaluating whether SLPs were capable of identifying and measuring stuttering in preschoolers speaking a language other than their own.
  – This was the first study to explore how SLPs with a range of linguistic backgrounds measure the severity of stuttering in preschoolers speaking a range of languages.
  – Two-minute speech samples from seven preschool-aged children speaking different languages were evaluated for stuttering severity.
  – The language were Danish, English, French, German, Greek, Italian, and Persian (Farsi).
Studies with Children

- The judges were nine groups of SLPs (181 total); each of seven of the groups consisted of native speakers of one of the seven languages of the children with two other groups (from Malta and the USA).
- The study was conducted over the internet.
- Judges used a 10-point stuttering severity scale (1 = “no stuttering” to 10 = “extremely severe stuttering”).
Studies with Children

Results

• The results indicated that differences in the stuttering severity ratings were not related to the judges’ proficiency in the child's language.
Studies with Adults

- In contrast to studies with children, more research has been conducted on both (1) the assessment of bilingual adults who stutter and (2) issues of assessing stuttering in adults speaking an unfamiliar language. For example, there is a fairly large body of research that has examined the features of stuttering behaviors in bilingual speakers:
  - Ardila, Ramos, & Barrocas, 2011
  - Chiam, 2013
  - Howell et al., 2004
  - Lim, Lincoln, Chan, & Onslow, 2008
  - Schafer & Robb, 2012
  - Shenker, Conte, Gingras, Courcey, & Polomeno, 1998
Studies with Adults

- The preponderance of evidence suggests that the frequency and severity of stuttering occurs differentially across the languages of bilingual stuttering speakers.
  - Specifically, most studies indicated a higher rate of stuttering in the less proficient language (L2) – for instance more stuttering in English for native German speakers (Schafer & Robb, 2012), and more stuttering in English for native Mandarin speakers, and more stuttering in Mandarin for native English speakers (Lim et al., 2008).
  - Due to the differential presentation of stuttering across languages in bilingual speakers, the clinical assessment of these individuals may be challenging for many SLPs.
Studies with Adults

• Van Borsel and Britto Pereira (2005) asked panels of Brazilian and Dutch SLP students to judge fluent and stuttered speech samples from speakers of Portuguese and Dutch. They reported that the judges accurately identified the speakers as normally fluent or stuttering speakers, regardless of language familiarity.

– For the stuttering speakers, the judges were also able to accurately rate the severity of the stuttering.

– However, when more specific information on the characteristics of the stuttered speech was requested, the students provided more detailed responses for the speech samples in their native language.
Studies with Adults

• In a related study, Van Borsel, Leahy, and Britto Pereira (2008) reported that the “closeness of language” appeared to play a role in the accuracy of SLP students’ stuttering judgments.
  – That is, English and Dutch students had more agreement on assessing Dutch stuttering speakers compared to a group of Portuguese-speaking students.
  – This finding suggested that SLPs performance on stuttering assessment may not be entirely language independent.
Studies with Adults

- Lee, Robb, Ormond, & Blomgren (2014) conducted a study designed to provide further information on the influence of language familiarity on stuttering assessment.
  - The study was designed to assess both broad judgments of stuttering severity and finer judgments including:
    - location and type of individual stuttering moments
    - the duration of the three longest stuttering moments
    - judgment of the physical concomitants (secondary behaviors) of stuttering
Studies with Adults

- The study compared stuttering judgments of a group of 19 English-speaking SLPs to the judgments of three expert Spanish-English bilingual SLPs.

- The speakers were two Spanish-English bilingual adults who stuttered.

- Each speaker provided two readings of the Rainbow Passage – one in English and one in Spanish.

- For data collection purpose, the SSI-3 (Riley, 1994) was adapted to produce a stuttering judgment form. Use of the SSI increased validity and relevance of the study as it is the most commonly used measure of stuttering severity.
Studies with Adults

RESULTS indicated that the 19 English-speaking SLPs:

1. judged stuttering frequency to be greater in Spanish than English for one speaker and equal in Spanish and English for the other speaker. This was the same as the 3 bilingual judges.

2. were more accurate at evaluating individual moments of stuttering for the English samples compared to the Spanish samples.

3. identified fewer and less severe stuttering behaviors than the bilingual SLPs in both languages.

4. Were accurate judges of overall stuttering severity in both languages.
RESULTS

Figure 1. English-Speaking (E-S) SLPs’ Judgments of Stuttering Frequency for Spanish and English Reading Samples
RESULTS

Figure 2. English-Speaking (E-S) SLPs’ Judgments of Physical Concomitants for Spanish and English Reading Samples
Conclusions

• SLPs can make accurate fluency assessments in languages other than their own when the criteria are limited to general frequency or severity assessments.
  – This finding is true in both children (e.g., Einarsdóttir & Ingham, 2009; Bosshardt, Packman, Blomgren, et al, 2014) and adults (e.g., Van Borsel & Britto Pereira, 2005; Lee, Robb, Ormond, & Blomgren, 2014).

• Nearly all studies on children and adults that assessed narrower features of stuttering (type of stuttering, duration, concomitant behaviors, etc.) suggest that the scores tend to be higher when the SLP is proficient or familiar with the language of the speaker.
Conclusions

- Overall, the findings from these studies are encouraging:
  - It is now clear that broad judgments of stuttering are not significantly influenced by language familiarity.
  - Therefore, SLPs should feel empowered to assess children or adults who stutter even if they speak a different language than the SLP.
Conclusions

• However, it is important to note that finer characteristics of stuttering will likely be hidden in an unfamiliar language.
  – It would always be appropriate to have assistance of an individual fluent in the language of the stuttering individual when conducting an assessment.
  – An interpreter would certainly be required to help assess important social, occupational, anxiolytic, and other affective areas related to stuttering.

• In bilingual speakers it would also be prudent to assess stuttering in all languages spoken by the individual as the stuttering may manifest itself differentially in the different languages.
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