Measuring Stuttering Attitudes in the Client’s Environment: A New Clinical Tool
Poster Presented at the Stuttering Attitudes Research Symposium
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I. RATIONALE
A. Evidence from POSHA–S indicates that public attitudes toward stuttering…
   1. Can be effectively quantified
   2. Can be changed
   3. Are not all the same
      a. E.g., attitudes of people who stutter generally more accurate & sensitive than those of the nonstuttering majority
B. Early prototype of POSHA–S (St. Louis, 2012)
   1. Had many more items than the final version
   2. Used a 1-9 scale
      a. Assumed to be potentially sensitive to changes in individual attitudes
      b. Primarily a measure developed for populations—not individuals
         1) Thus, 1-9 scale replaced with a simpler rating scale to foster a shorter, more user-friendly final POSHA–S
C. Logical extension: a clinical instrument that can accurately measure individual stuttering client’s attitude environment
   1. Numerous instruments can measure a stuttering client’s own thoughts, perceptions & emotions (e.g., OASES [Yaruss & Quesal, 2008]; PSI [Wooff, 1967]; SL-ILP-S [St. Louis, 2001])
   2. Few instruments available to measure thoughts, perceptions & emotions of their immediate families & close friends (e.g., PATCS [Langevin & Hagler, 2004])

II. PURPOSE
A. To field test a prototype of the Appraisal of the Stuttering Environment (ASE) with adults who stutter, their close family members, their close friends & the public

III. METHOD
A. ASE resembles the POSHA–E2 prototype (St. Louis, 2012)
   1. Added 50 items to the 45 existing attitude items in the POSHA–S included in the subscores & Overall Stuttering Score (OSS)
      a. 95 items, 11 component, 3 subscores, 1 OSS = 110 attitude variables
   2. 1-9 rating scale throughout
   3. Same demographic information as POSHA–S in experimental prototype
B. Authors recruited convenience samples of…
   1. Adults who stutter (n = 32) from clients, acquaintances & referrals
      a. From PWS, requested names of 4 close family members & 4 close friends of about the same age
   2. Family (n = 47) & friends (n = 41) who responded with stuttering referrer in mind to requests by email, mail & phone
   3. Anonymous control group (n = 45)
C. Measures obtained
   1. SSI-4 for PWS [face-to-face, telephone, Skype]
      a. not yet analyzed
   2. ASE for PWS (mostly paper), family/friends (mostly online) & controls (paper)
   3. OASES for PWS (paper)
   4. SL-ILP-S for PWS & adapted version for family & friends (paper & online)
   5. Short questionnaire about frequency of stuttering symptoms (e.g., repetitions, prolongation, avoidance, accessory behaviors) for family & friends (paper & online)
D. ASE ratings compared among 4 groups & to ~1000 nonstuttering respondents from early POSHA–S prototype with 1-9 ratings
   1. ASE scores converted to mean ratings from -100 to +100 scale (0 = neutral): Higher scores more positive
2. Compared...
   a. Individual items
   b. Components (clusters of items)
   c. Subscores (clusters of components)
      1) Beliefs About PWS [BEL]
      2) Self Reactions To PWS [SR]
      3) Obesity / Mental Illness [OMI]
   d. Overall Stuttering Score (OSS) (mean of the two stuttering subscores: BEL & SR)
3. Ran t tests for independent samples for all pair-wise comparisons
   a. Bonferroni correction (p ≤ .00417 [.05/12])
   b. Cohen’s (1988) d effect sizes for statistically significant differences

IV. RESULTS
A. Demographic summary (Table 1)
B. Appraisals of stuttering (Table 2)
   1. OASES Total Impact Score: 7% mild; 36% mild-mod; 36% moderate; 18% mod-severe; 4% severe
   2. SL-ILP-S Self-judged severity item: 1–6% “none”; 2–16% “very mild”; 3–25%; 4–15%; 5–16% “moderate”; 6–9%; 7–6%; 9–3%; 9–3% “very severe”
C. Subscores & OSS (Table 3; Figure 1)
D. Pair-wise ratings t test comparisons between PWS, family, friends & controls
   1. 24%–39% significantly different except family vs friends (3%)
   2. Mean Cohen’s d for these comparisons 1.45 (“very large”)
E. Sample comparisons between stuttering persons & their family or friends
   1. No differences for obesity & mental illness items, components & subscore
   2. Compared to controls, PWS, family & friends…
      a. Knew a great deal more about stuttering
      b. Were much less concerned if others (e.g., one’s doctor, child’s teacher) stuttered
   3. PWS much more likely to be curious about stuttering than other groups
   4. PWS much more likely to wait patiently or advise “slow down/relax” during stuttering than family or friends, but not much different from controls
   5. PWS much less likely to believe they should have a job requiring lots of talking than their family & considerably less likely than friends
      a. But PWS more likely than family or friends to believe they should have influential jobs
   6. PWS more likely than friends & family to reject pressure or tension at home & bilingualism in childhood as causes
   7. PWS more likely than friends & family to accept physical makeup, brain function & genetic causes

V. IMPLICATIONS
A. ASE shows promise as a clinical instrument that is reasonably comparable to the POSHA–S
   1. Mean component, subscore & OSS values higher for ASE than POSHA–S by 5.5 for PWS, 3.0 for family, 2.0 for friends & 2.8 for controls
B. Family & friend attitude environments for the stuttering adults more positive than the general public
   1. Likely both cause & effect of having a stuttering relative
   2. Likely the effect of having a stuttering friend
      a. Consistent with known schoolmates (Kangevin, Kleitman, Packman & Onslow, 2009)
C. Next steps
   1. Replicate these preliminary findings with other samples
   2. Stuttering persons who never had any speech therapy or self help
   3. Stuttering children & their parents, siblings & friends
   4. International comparisons
   5. Finalize the ASE & make it available to clinicians
      a. May involve addition or deletion of items
      b. May involve deletion of non-stuttering general items
      c. Will involve deletion of many demographic items
   6. Determine effect of improving the stuttering environment on stuttering severity & response to treatment & vice versa

REFERENCES


**Table 1. Demographic Means.**

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>PWS</th>
<th>Family</th>
<th>Friends</th>
<th>Controls</th>
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<tbody>
<tr>
<td>Number</td>
<td>32</td>
<td>47</td>
<td>41</td>
<td>45</td>
</tr>
<tr>
<td>Age (yr)</td>
<td>31.6</td>
<td>49.1</td>
<td>36.5</td>
<td>41.2</td>
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<tr>
<td>Education (yr)</td>
<td>14.8</td>
<td>14.6</td>
<td>15.2</td>
<td>14.1</td>
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<tr>
<td>Male / Female (%)</td>
<td>71 / 29</td>
<td>22 / 78</td>
<td>43 / 57</td>
<td>42 / 58</td>
</tr>
<tr>
<td>Student / Working (%)</td>
<td>41 / 63</td>
<td>15 / 49</td>
<td>41 / 34</td>
<td>33 / 67</td>
</tr>
<tr>
<td>Married / Parent (%)</td>
<td>38 / 28</td>
<td>79 / 70</td>
<td>37 / 39</td>
<td>56 / 56</td>
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<tr>
<td>Income Score (-100 to +100)</td>
<td>5</td>
<td>12</td>
<td>12</td>
<td>6</td>
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<tr>
<td>Race (Cauc / Af Amer / Other) (%)</td>
<td>87 / 10 / 3</td>
<td>95 / 5 / 0</td>
<td>87 / 5 / 8</td>
<td>98 / 0 / 2</td>
</tr>
<tr>
<td>Religion (Christian / Other / n/a) (%)</td>
<td>69 / 27 / 4</td>
<td>77 / 5 / 18</td>
<td>58 / 17 / 25</td>
<td>100 / 0 / 0</td>
</tr>
<tr>
<td>Self Identification (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obese</td>
<td>19</td>
<td>4</td>
<td>15</td>
<td>16</td>
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<tr>
<td>Mentally Ill</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Person Who Stutters</td>
<td>78</td>
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<td>2</td>
<td>0</td>
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<tr>
<td>No Persons Known (%)</td>
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<td></td>
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<tr>
<td>Obese</td>
<td>0</td>
<td>0</td>
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<td>4</td>
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<tr>
<td>Mentally Ill</td>
<td>16</td>
<td>28</td>
<td>12</td>
<td>18</td>
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<tr>
<td>Person Who Stutters</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>36</td>
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**Table 2. OASES, SL-ILP-S/Adapt & Questionnaire Means**

<table>
<thead>
<tr>
<th></th>
<th>PWS</th>
<th>Family</th>
<th>Friends</th>
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<tbody>
<tr>
<td>OASES Total Impact</td>
<td>48.3</td>
<td>—</td>
<td>—</td>
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<tr>
<td>SL-ILP Total Effect</td>
<td>31.7</td>
<td>38.7</td>
<td>31.1</td>
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<td>SL-ILP Help Others</td>
<td>7.0</td>
<td>7.7</td>
<td>9.1</td>
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<tr>
<td>SL-ILP Health/Life Satisfaction</td>
<td>9.3</td>
<td>8.2</td>
<td>8.2</td>
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<tr>
<td>Questionnaire</td>
<td>—</td>
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**Table 3. Mean Subscores & OSS.**

<table>
<thead>
<tr>
<th></th>
<th>OMI</th>
<th>BEL</th>
<th>SR</th>
<th>OSS</th>
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<tbody>
<tr>
<td>Adults Who Stutter</td>
<td>-29</td>
<td>52</td>
<td>38</td>
<td>20</td>
</tr>
<tr>
<td>Family</td>
<td>-28</td>
<td>45</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>Friends</td>
<td>-30</td>
<td>44</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Controls</td>
<td>-28</td>
<td>33</td>
<td>-7</td>
<td>13</td>
</tr>
<tr>
<td>Median (22 samples)</td>
<td>-33</td>
<td>27</td>
<td>-11</td>
<td>7</td>
</tr>
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</table>

Figure 1. Summary Graph of PWS, Family, Friends & Controls.
BELIEFS: ABOUT PWS

TRAILS

SOURCE

TRAITS

HELP

CAUSE

DISTANCE/SYMPATHY

HELPING

SELF REACTIONS: TO PWS

OBESITY/MENTAL ILLNESS

AMOUNT KNOWN

WANT/HAVE

IMPRESSION

OVERALL STUTTERING SCORE
Stuttering Adults: 45
Family Members: 31
Friends: 28
Control Adults: 13