I. INTRODUCTION
   A. Research on effects of severity of stuttering on public attitudes toward stuttering are mixed
      1. Some show better attitudes of the public toward a person with mild stuttering (e.g., Collins & Blood, 1990; Turnbaugh, Guitar & Hoffman, 1979)
      2. Others show no difference as a function of severity (e.g., Gabel, Hughes & Daniels, 2009)
      1. POSHA–S developed as a standard measure of public attitudes for a wide variety of settings, groups, languages & geographic areas (e.g., Abdalla & St. Louis, 2012; St. Louis, 2012)
      a. Severity unspecified
      2. POSHA–S database contains 167 different samples representing 7197 respondents from 28 countries & 18 languages (circa April, 2013)

II. PURPOSE
   A. To determine differences in attitudes if people who stutter are described as mild vs severe
   B. To determine differences in attitudes toward people who stutter in two widely different cultures, the USA & Kuwait

III. METHOD
   A. Two versions of POSHA–S created, translated to Arabic & handed out alternatively
      1. 1-Relating to a hypothetical person with mild stuttering (Re: Mild)
      2. 2-Relating to a hypothetical person with severe stuttering (Re: Severe)
      3. Each version had mild (slight) & severe (strong) versions of four other attributes
         a. Mildly vs severely mentally ill
         b. Somewhat obese (overweight) vs morbidly obese
         c. Mostly left handed vs completely left handed
         d. Fairly intelligent vs extremely intelligent
   B. 2nd, 3rd & 4th authors recruited convenience samples of students (exclusively in Kuwait & mostly in the USA)
      1. None were SLP students or practitioners
   C. Respondents (see Table 1)
      1. USA (in English)
         a. 100 respondents (69% return rate)
            1) (Re: Mild)—50 respondents: 22 males & 28 females
            2) (Re: Severe)—50 respondents: 17 males, 33 females
      2. Kuwait (in Arabic)
         a. 111 respondents (74% return rate)
            1) (Re: Mild)—56 respondents: 26 males & 30 females
            2) (Re: Severe)—55 respondents: 25 males, 30 females
            c. Reduced at random to 50 each with equal numbers of males & females
   D. POSHA–S ratings converted to mean ratings from -100 to +100 scale (0 = neutral): Higher scores more positive
      1. 60 standard comparisons (St. Louis, 2011)
         a. Individual items
         b. Components (clusters of items)
         c. Subscores (clusters of components for Beliefs About People Who Stutter [BEL], Self Reactions To People Who Stutter [SR] & Obesity / Mental Illness [OMI])
         d. Overall Stuttering Score (OSS) (mean of the two stuttering subscores)
      2. Ran t tests for independent samples for all pair-wise comparisons
a. Bonferroni correction ($p \leq .00417 [.05/12])

b. Cohen's (1988) $d$ effect sizes for statistically significant differences

3. Database comparisons with median sample mean ratings

IV. RESULTS

A. Re: Mild & Re: Severe compared (Table 2 & Figures 1 & 2)

B. Re: Mild vs Re: Severe

1. USA

a. 4/60 (7%) significantly different (mean Cohen's $d = .70$ "moderate-large"); all favoring Re: Mild
   1) Personal knowledge source for stuttering (item)
   2) knowledge of stuttering (component)
   3) impression of obesity (item)
   4) Obesity/Mental Illness (subscore)

2. Kuwait

a. 8/60 (13%) significantly different (mean $d = .60$ "moderate"); all favoring Re: Mild
   1) School source for stuttering knowledge (item)
   2) Impression of stuttering (item)
   3) Want overweight/obesity (item)
   4) Impression of OMI (component)
   5) Want/have OMI (component)
   6) Social distance/sympathy (component)
   7) Self Reaction to PWS (subscore)

3. Few items favored severe over mild
   a. E.g., should have job with good judgment & "people like me" to help (Kuwait)
   b. E.g., genetic cause & try to ignore stuttering (USA)

4. Some puzzling results
   a. Nonsignificantly better overall impressions of & wanting to be "fairly intelligent" than "extremely intelligent" in USA respondents

C. Comparison of USA & Kuwait to POSHA–S database median

1. Obesity/mental illness ratings similar in USA & Kuwait; median ratings between Re: Mild & Re: Severe

2. USA Beliefs higher & Kuwaiti Beliefs lower than median

3. USA & Kuwaiti Self Reactions higher than median

4. USA & Kuwaiti Re: Mild OSS higher than median

D. USA vs Kuwait

1. USA attitudes more positive than Kuwaiti attitudes: 20/60 (33%) (mean $d = .62$ "moderate")
   a. 13/60 (22%) favoring USA over Kuwait
   b. 7/60 (11%) favoring USA over Kuwait
      1) E.g., Sources of knowledge, comfort around a stuttering person & wanting/having obesity or mental illness

2. Country differences for Re: Mild & Re: Severe
   a. Re: Mild: 9/60 (15%) significant (mean $d = .93$ "large")
   b. Re: Severe: 10/60 (17%) significant (mean $d = .88$ "large")

V. IMPLICATIONS

A. Severity of stuttering, however interpreted, is related to POSHA–S attitudes for Americans & Kuwaitis

1. Conclusion robust in two widely different cultures & languages

2. Attitudes toward mild stuttering generally better than for severe stuttering
   a. Consistent with role-entrapment results of Gabel et al. (2008)
   b. Yet not true for all items

3. Even so, severity for hypothetical stuttering is a weak predictor
   a. Possible that stronger differences would emerge with actual models (e.g., shown by Collins & Blood, 1988)

B. American attitudes better than Kuwaiti attitudes overall

1. Much more so for Beliefs about PWS than Self Reactions to PWS

REFERENCES


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### Table 1. Demographic Means

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>US Re: Mild</th>
<th>US Re: Severe</th>
<th>Kuw Re: Mild</th>
<th>Kuw Re: Severe</th>
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<tr>
<td>Number</td>
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<td>50</td>
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<td>50</td>
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<tr>
<td>Age (yr)</td>
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<td>25.3</td>
<td>20.8</td>
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<td>Education (yr)</td>
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<td>13.1</td>
<td>13.1</td>
<td>12.7</td>
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<tr>
<td>Male / Female (%)</td>
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<td>34 / 66</td>
<td>50 / 50</td>
<td>50 / 50</td>
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<tr>
<td>Student / Working (%)</td>
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<td>100 / 0</td>
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<td>12 / 12</td>
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<td>Income Score (-100 to +100)</td>
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<td>Race (Cauc / Arab+Kuwaiti / Other (%))</td>
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<tr>
<td>Religion (Christian / Muslim / Other (%))</td>
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#### Self Identification (%)

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<th>Stuttering</th>
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<td>6</td>
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<td>0</td>
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<tr>
<td>22</td>
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<td>4</td>
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<table>
<thead>
<tr>
<th>No Persons Known (%)</th>
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<th>Mentally Ill</th>
<th>Stuttering</th>
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<tbody>
<tr>
<td>2</td>
<td>12</td>
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<td>12</td>
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<td>32</td>
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<td>26</td>
<td>52</td>
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### Table 2. Samples from USA & Kuwait, data from USA students re: “stuttering” (no reference to severity) & POSHA-S database

<table>
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<tr>
<th>(Sub)Score</th>
<th>USA</th>
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<td>Re: Mild*</td>
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<td>-27</td>
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<td>23</td>
<td>8</td>
<td>15</td>
<td>24</td>
<td>19</td>
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<tr>
<td>Re: Severe*</td>
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<td>-44</td>
<td>41</td>
<td>18</td>
<td>1</td>
<td>-1</td>
<td>21</td>
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<td>Database Median</td>
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<td>-3</td>
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*Also applies to other attributes (i.e., obesity and mental illness)
Figure 1. Summary graph of American respondents’ ratings of Re: Mild vs Re: Severe

Figure 2. Summary graph of Kuwaiti respondents’ ratings of Re: Mild vs Re: Severe