Male versus female attitudes toward stuttering

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ABSTRACT

Purpose: The study investigated the extent to which differences existed between public attitudes of males versus females.

Method: One hundred adults, 50 males and 50 females, were chosen at random from each of 50 study samples comprising a total of 3,371 respondents in a database archive who had completed the Public Opinion Survey of Human Attribute-Stuttering (POSHA-S). None of the database samples included speech-language pathology students/practitioners or self-identified people who stutter.

Results: Public attitudes were very similar between male and female respondents. None of the standard POSHA-S comparisons were significantly different statistically, even though a few trends for differences were observed between the males and females.

Conclusions: Attitudes toward stuttering of adult males and females, as measured by the POSHA-S, are very similar.

Learning outcomes: Readers of this article should be able to: describe the framework for reporting the results of the Public Opinion Survey of Human Attributes-Stuttering (POSHA-S); describe similarities and differences between attitudes toward stuttering of adult males and females on the POSHA-S.

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1. Introduction and purpose

A burgeoning area of research has shown that nonstuttering attitudes toward stuttering, especially when rating hypothetical people who stutter (e.g., Al-Khaledi, Lincoln, McCabe, Packman, & Alshatti, 2009; Betz, Blood, & Blood, 2007; Blood, Blood, Tellis, & Gabel, 2003; Boyle, Blood, & Blood, 2009; Craig, Tran, & Craig, 2003; Doody, Kalinowski, Armson, & Stuart, 1993; Dorsey & Guenther, 2000; Flynn & St. Louis, 2011; Gabel, Blood, Tellis, & Althouse, 2004; Ham, 1990; Hughes, Gabel, Irani, & Schlagheck, 2010; Hulit & Wirtz, 1994; MacKinnon, Hall, & MacIntyre, 2007; Özdemir, St. Louis, & Topbaş, 2011b; St. Louis, Lubker, Yaruss, & Aliveto, 2009; St. Louis & Roberts, 2010; Van Borsel, Verniers, & Bouvy, 1999). In a comprehensive review, Hughes (2008) summarized research on attitudes toward stuttering for males versus females both from the perspective of the sex 1 of the respondent and the sex of the person who stutters (actual or hypothetical). The results are mixed. For example, in two similar studies, but the latter with a control group, Burley and Rinaldi (1986) and Patterson and Pring (1991) found no differences in attitudes toward males versus females who stuttered, regardless of the sex of the respondents. By contrast, Burley and Rinaldi (1986) reported more negative attitudes of their male respondents compared to their female respondents, but Patterson and Pring (1991) reported no differences. Weisel and Spektor (1998) also reported more negative attitudes for adult males than females. Among young

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1 In many recent articles, the term “gender” is used to refer to whether a person is male or female (e.g., Hughes, 2008). The term “sex” is used in the paper rather than “gender” because, in epidemiology, there are important differences between the terms (Kreiger, 2003). The POSHA-S asks respondents to identify their “sex” either “male” or “female.”

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children, Hartford and Leahy (2007) reported no differences for boys and girls. Similarly, Langevin (2009) reported no significant differences from school-aged children’s attitudes toward stuttering with respect to their sex, but in another investigation, a few comparisons were more positive for girls than for boys (Langevin, Kleitman, Packman, & Onslow, 2009). Evans, Healey, Kawai, and Rowland (2008) found that the sex of middle school students did not make a difference in their stuttering attitudes.

Some authors who inspected individual questionnaire items, e.g., de Britto Pereira, Rossi, and Van Borsel (2008) and Xing Ming, Jing, Yi Wen, and Van Borsel (2001), found that males had more positive or accurate perceptions of those who stutter than females on some items, but for other items, the reverse was observed. Though not reported by Flynn and St. Louis (2011), Flynn and St. Louis (2007, 2009) also found mixed results in high school students’ stuttering attitudes among items according to sex, but in these studies, sex was partly confounded with honors versus regular classes, i.e., more females in the honors classes. St. Louis (2010) reported that males and females selected equally from numerous samples in the POSHA-S archive held very similar attitudes. This study, however, drew respondents from a few studies of speech-language pathology students or practitioners (e.g., Board Recognized Specialists in Fluency Disorders) and two samples of people who stutter. Accordingly, it is possible that the familiarity of a small proportion of the groups with stuttering, atypical of the general public, could have affected the mean attitude ratings.

Clearly, as reported by Hughes (2008), the effects of sex of the respondents on stuttering attitudes are not clear. If there are differences, it is likely that they are not large. Still, important differences may exist. Why is this important? Circa October, 2011, more than 100 nations had signed the United Nations Convention on the Rights of Persons with Disabilities (CRDP) and, among many other commitments, recognized that attitudinal barriers hinder full participation of people with disabilities from “full and effective participation in society” (United Nations, 2006, CRDP, Preamble, [e]). The Convention further emphasized “the need to incorporate a gender perspective” into all efforts to ensure rights and freedoms of those with disabilities (United Nations, 2006, CRDP, Preamble [s]). If it can be shown that males hold different attitudes toward stuttering than females, then stakeholders attempting to improve attitudes might well target males and females separately rather than together. The purpose of this investigation was to determine the extent to which the attitudes of nonstuttering males and female adults from widely variant samples around the world, excluding entire sample groups with training or experience in speech-language pathology, were similar or different on a standard measure of stuttering attitudes, i.e., the Public Opinion Survey of Human Attributes-Stuttering (POSHA-S).

2. Method

2.1. POSHA-S

The POSHA-S was developed as a standard measure of stuttering attitudes (St. Louis, 2005, 2011a,b,c; St. Louis, Lubker, Yaruss, Adkins, & Pill, 2008) with empirical documentation of its equivalence using 1–9 versus 1–5 and 1–3 (see below) rating scales (St. Louis, in press-b; St. Louis, Hancock, & Remley, 2010), reliability (St. Louis, in press-b; St. Louis, Reichel, Yaruss, & Lubker, 2009; St. Louis, Remley, & Hancock, 2010), construct and concurrent validity (Flynn & St. Louis, 2011; St. Louis, Reichel, et al., 2009), internal consistency (Al-Khaledi et al., 2009; St. Louis, in press-b), translatability to another language (St. Louis & Roberts, 2010), robustness in online versus paper-and-pencil administration (St. Louis, in press-a), and sensitivity to differences from probability versus convenience sampling (Özdemir, St. Louis, & Topbaş, 2011a). The POSHA-S concludes with a detailed section devoted to stuttering (e.g., St. Louis, 2005, 2011b,c; St. Louis et al., 2008). Rating scales in the demographic and general sections require a 1–5 rating. Items in the detailed stuttering section require a “yes,” “no,” or “not sure” choice; these choices are converted to a 1–3 scales as follows: “no” = 1, “not sure” = 2, and “yes” = 3. Moreover, all scale ratings are converted to a scale from –100 to +100 where 0 = neutral. The signs (either + or –) of the converted scores for some detailed stuttering items, e.g., “People who stutter are shy and fearful” are reversed so that, uniformly, lower scores reflect less sensitive or accurate attitudes and higher scores reflect more sensitive or accurate attitudes.

The POSHA-S is scored by averaging clusters of items that reflect various components. For example, the “Traits” component is the mean of three items, i.e., people who stutter (a) are to blame for their stuttering, (b) are nervous and excitable, and (c) are shy and fearful. The “Social Distance/Sympathy” component reflects means for (a) feeling comfortable, pity, or impatience while talking with a person who stutters; (b) being worried or concerned if one’s doctor, neighbor, sibling, or oneself stuttered; and (c) evaluating one’s overall impression of stuttering and wanting to stutter. Components are combined into three subscores, one for Obesity and mental illness and two for stuttering (i.e., beliefs about people who stutter and self reactions to people who stutter). The mean of the two stuttering subscores is the Overall Stuttering Score.

Users of the POSHA-S have been requested to contribute their data to a growing database archive that permits comparisons of individual samples with all that have been reported at any given date (St. Louis, 2011a,b). For each dimension scored on the POSHA-S, results are typically compared with the lowest, highest, and median sample mean from all those in the archive.
2.2. Respondent selection

Circa September 2011, the POSHA-S database contained 4220 respondents representing 13 countries (USA, Canada, Brazil, Nicaragua, Denmark, Bulgaria, Turkey, Kuwait, Russia, Nepal, China, Cameroon, and South Africa) and 9 languages (English, French, Spanish, Brazilian Portuguese, Bulgarian, Turkish, Russian, Arabic, and Chinese) sampled from 59 different pilot studies.\(^2\) Thirty-four percent of these 4220 respondents were male, compared to 66% who were female. For this study, 802 respondents from nine samples containing speech-language pathology students or practitioners or people who stutter were eliminated. Also, from the remainder, 47 individuals who identified themselves as people who stutter on one demographic item were also eliminated from consideration. This left 3371 potential respondents from 50 samples (with three early West Virginia samples combined into one), ranging in number from 8 to 424 respondents with a mean of 71. From this database, two respondents were selected at random from each sample, one male and one female, yielding a total of 50 males and 50 females.

3. Results

3.1. Respondent characteristics

Figs. 1 and 2 show standard POSHA-S demographic information for the male and female samples (St. Louis, 2011a,b). The mean ages were 37 and 32 years for the two samples, respectively, indicating that the average POSHA-S database male respondents were slightly older than the average female respondents. The males also reported slightly higher relative incomes, with arbitrary scores of “18” versus “9,” wherein “0” would indicate average income relative both to one’s friends and family (a 3 rating on the 1–5 scale) as well as to everyone in one’s country (3 rating on the 1–5 scale). To place these income scores into perspective, the mean score of all the database respondents was “1.” By contrast mean years of education for males and females were virtually the same, 13.3 years. These and other demographic variables provide the potential to generate further predictors of stuttering attitudes using respondents from the POSHA-S archive (St. Louis & Rogers, 2011a,b).

Fig. 2 shows means for the males and females in comparison to the lowest, highest, and median ratings for samples observed so far in the POSHA-S archive. Males were slightly more likely to be married than females, having virtually the same percentage of married respondents as the median sample distribution from the archive, i.e., 50%. Both samples contained fewer parents than the median sample percentage. In terms of work status 62% and 56% of the males and females, respectively, indicated they were currently working, compared to 6% and 20% who were not working and 12% and 2% who were retired. Self-identification on the last of the four general items wherein one choice for “persons known” with each attribute (stuttering plus the four anchors) was “me,” i.e., the respondent himself or herself. By the selection criteria applied for this study, none of these respondents could have self-identified themselves as stuttering and, though possible, none identified themselves as mentally ill. Roughly a quarter and a third, respectively, of males and females reported knowing no one who stuttered.

3.2. Male versus female attitudes

Fig. 3 is the standard summary graph for POSHA-S results for the males and females (St. Louis, 2011b). More positive attitudes are shown by points closer to the periphery; more negative attitudes, closer to the center. Although slight differences are visible, the profiles are nearly identical, indicating very similar attitudes. Table 1 provides the numerical values for the males and females in comparison to mean values from the archive (i.e., St. Louis, 2011b). It should be noted that

\(^2\) Uses of and access to the POSHA-S database is explained in the author’s website at www.stutteringattitudes.com (St. Louis, 2011a).
t tests for independent respondents between the two groups using the Bonferroni correction of \(0.05/12\) or \(p < 0.00417\) revealed no significant differences for any of the POSHA-S variables.

Fig. 4 shows typical profiles for the five attributes in the general section. Again, male and female profiles were very similar with no statistically significant differences. Visibly, however, females showed a trend for higher scores indicating better impressions of obesity than males \((p = 0.053)\) and knowing slightly more about intelligence, left handedness, obesity, and mental illness, but not more about stuttering.

Fig. 5 lists all the items and components for the Beliefs subscore. None of the comparisons were significantly different. Nonetheless, males in this sample showed a trend for more accurate knowledge of stuttering etiology with respect to not

| Mean ratings for POSHA-S components, subscores, and Overall Stuttering Scores for the male and female samples compared to median values from the POSHA-S database (St. Louis, 2011b, in press-b). |
|---------------------------------|---------------------------------|---------------------------------|
| **OVERALL STUTTERING SCORE**    | **Beliefs About Persons Who Stutter Subscore** | **Obesity/Mental Illness Subscore** |
| Males                          | 9                               | -40                             |
| Females                        | 10                              | -33                             |
| Archive median                 | 7                               | -33                             |
| **Traits/personality**         | 29                              |                      |
| Stuttering should be helped by | 24                              |                      |
| Stuttering is caused by        | 10                              |                      |
| Potential                      | 32                              |                      |
| **Self Reactions to People Who Stutter Subscore** |                      |                      |
| Accommodating/helping         | 45                              |                      |
| Social distance/sympathy       | 0                               |                      |
| Knowledge/experience           | -45                             |                      |
| Knowledge source               | -48                             |                      |
| **Overall impression**         | -32                             |                      |
| Want to be                     | -80                             |                      |
| Amount known about             | -6                              |                      |

Fig. 2. Demographic results summarizing percentages of males and females according to sex, marital/parental/work status, and self-identification of—or familiarity with—five human attributes.

Fig. 3. Summary POSHA-S graph for males and females showing components, subscores, and Overall Stuttering Scores.
being caused by “a very frightening event” \( (p = .049) \). By contrast, females had a trend for more positive attitudes about whether or not a person who stutters “should have jobs where they have to correctly understand and decide important things” (i.e., have good judgment) \( (p = .015) \).

**Fig. 6** shows similar male versus female mean components and items for Self Reactions, with no significant sex differences. The graph shows that for this subscore, females had a trend of reporting less impatience than males \( (p = .052) \) as well as having more information about stuttering from “magazines, newspapers, or books” \( (p = .018) \) and “school” \( (p = .047) \). The figure shows a large difference for “people like me” being recommended as potential help for a person who stutters between the two sexes, but since this item was a relatively recent addition to the POSHA-S, data were available for only 13 females and 14 males with little statistical power. Thus, the difference is only suggestive of a trend as well \( (p = .180) \).

Overall, the results indicate small and not statistically significant differences between males and females on the POSHA-S. Because the respondents were selected systematically from numerous and diverse populations around the world, using multiple POSHA-S translations, these findings can be generalized to nonstuttering male and female adults with some confidence.
4. Discussion

The review of the studies that compared male versus female public attitudes toward stuttering concluded that the results were mixed. Some studies showed differences, even though some effect sizes were small (Langevin, 2009), and some did not. The POSHA-S was developed to provide a standard measure of public attitudes toward stuttering. Since most convenience samples to date in the POSHA-S archive have more females than males who filled out questionnaires, it would be tempting to conclude that females who, in addition to being more likely to cooperate in this kind of research, might well have more positive attitudes toward stuttering than males. This study did not support such a conclusion. When respondents were selected from a large number of samples representing 13 countries and nine languages, male and female respondents' ratings were very similar to each other, and none of the 60 rating comparisons between the two sexes were significantly different. Trends toward potential differences did emerge, but it cannot be determined for sure the extent to which these were not simply random variations. Some of them may well represent expected variability since a few differences contrasted this sample with an earlier sample comparing 50 males and 50 females from the POSHA-S archive (St. Louis, 2010). In that study, one item was significant, i.e., females were more likely to report telling a stuttering person to "slow down and relax" than males (assumed in the POSHA-S to reflect a negative attitude). In this comparison, females were slightly less likely to offer that advice. By contrast, in the current study, a trend favored males for selected knowledge about etiology, i.e., not believing stuttering to be caused by a frightening event. The 2010 study favored females for being more patient, believing that people who stutter could hold jobs requiring good judgment, and reporting more information about stuttering from various sources. Overall, however, it can be concluded that adult males and adult females do not hold important attitude differences toward stuttering. The implication is that typical convenience samples that contain more females than male adults are likely to represent the general public.

Cautions must accompany such generalizations about the results of this study. Individual differences no doubt exist within certain POSHA-S samples that were purposely muted by selecting only one male and one female from a large number of diverse samples, regardless of location, sample size, or any other distinguishing feature. It may well be that some populations, e.g., individuals in various occupations, sex of the respondent would make important differences in stuttering attitudes. Only future research with the POSHA-S can elucidate this possibility. It is also important to note that although mixed results for stuttering attitudes of children contributed to the need for this study, generalizing the finding of little difference between stuttering attitudes of male and female children should be made with caution at this point without corroborating research using the POSHA-S. Additionally, the larger the sample size that might be selected from a large database such as the one utilized here, the greater the likelihood of statistically significant differences. Effect sizes would be important as well if differences were statistically significant. Finally, it is also important to point out that the effect of the sex of the hypothetical or real person who stutters can make a difference as well. The standard POSHA-S does not make that distinction, but research could be carried out that tests that possibility.

Appendix A. Continuing education

CEU questions:
1. Attitudes of adult males and females proportionally selected from the POSHA-S database archive:
   a. Were markedly better for males
   b. Were markedly better for females
   c. Were very similar or just slightly different for males and females on different items
   d. Were dramatically different for males and females on different items
2. The literature dealing with the effects of sex of respondents on their attitudes toward stuttering indicate that:
   a. All studies have shown no difference in attitudes of males versus females
   b. Males have uniformly less positive attitudes than females
   c. Males have uniformly more positive attitudes than females
   d. Neither sex has uniformly more positive attitudes than the other
3. Using the POSHA-S database archive, the 100 respondents in this study were selected from:
   a. Two pilot studies, one composed entirely of males and the other composed of females
   b. One male and one female each from 50 different pilot studies
   c. A random sample of 50 males and 50 females from all of the archive respondents
   d. The first 50 males and first 50 females in the archive
4. Respondents that were excluded from this study were:
   a. Speech-language pathology students and general practitioners of speech-language pathology
   b. Board recognized specialists in fluency disorders
   c. People who stutter
   d. All of the above
5. Based on the results of this study, the St. Louis concluded that convenience studies with more females than males:
   a. Probably accurately represent the attitudes of both sexes
b. Probably do not accurately represent the attitudes of both sexes
c. Are not typical of most convenience studies of nonstuttering adults
d. Suggest that females are more familiar with stuttering than males

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