# The Client's Perspective on Voluntary Stuttering

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**Purpose:** Voluntary stuttering is a strategy that has been suggested for use in the clinical literature but has minimal empirical data regarding treatment outcomes. The purpose of the present study is to explore client perspectives regarding the impact of the use of this strategy on the affective, behavioral, and cognitive components of stuttering.
**Method:** The present study used an original survey designed to explore the intended purpose. A total of 206 adults who stutter were included in the final data corpus. Responses were considered with respect to the type of voluntary stuttering the participants reportedly produced and the location of use.

**Results:** A client perceives significantly greater affective, behavioral, and cognitive benefits from voluntary stuttering when the production is closely matched to the client's actual stutter and when it is used outside the clinical environment.
**Conclusions:** To enhance client perception of associated benefits, clinicians should encourage use of voluntary stuttering that closely matches the client's own stuttering. Clinicians should also facilitate practice of voluntary stuttering outside of the therapy room. Finally, clinicians should be aware that clients, at least initially, may not perceive any benefits from the use of this strategy.

Stuttering is considered to be a complex, multifactorial disorder that often extends beyond the observable behavioral characteristics (e.g., overt features such as frequency, duration, and/or tension of stuttering moments, secondary behaviors, word fragmentation, avoidance, and/or substitution behaviors) to distinct, yet not as easily observable, affective and cognitive characteristics (e.g., negative emotions, self/listener perceptions, attitudes, and reactions; Walden et al., 2012). Together, the affective, behavioral, and cognitive correlates of stuttering can significantly compromise the overall quality of life of the person who stutters (Cooper & Cooper, 1995; Yaruss & Quesal, 2006). This is particularly true for the adult who stutters, compared with the child, because the adult will have more time and opportunities to perceive adverse experiences as a result of stuttering. Thus, assessment and treatment should identify the overt and covert features of stuttering (Manning, 2010).

Voluntary stuttering (also referred to as negative practice, pseudostuttering, and bouncing) is a technique used to reduce fear, anxiety, and/or negative emotions associated with stuttering (e.g., Bloodstein & Bernstein Ratner, 2008; Gregory, 2003; Guitar, 2013; Manning, 2010; Ramig &

Dodge, 2005; Van Riper, 1982). Voluntary stuttering is also used to decrease feelings of helplessness and loss of control during the moment of stuttering (Manning, 2010). To engage in voluntary stuttering, the clinician can either instruct the client to produce an exact duplication of his or her authentic stuttering or instruct the client to produce easy, effortless repetitions and/or prolongations (Ham, 1990a). Some clinicians recommend that clients initially produce easy repetitions and/or prolongations (Van Riper, 1973; Guitar, 2013) and then progress to the imitation of their real stuttering once they become more comfortable with the use of the technique (Gregory, 2003). Voluntary stuttering can also be used in the form of negative practice wherein the person first produces the voluntary stutter with significant tension and duration and then produces the same instance of stuttering but with half the amount of tension and/or duration.

To date, research has largely focused on how voluntary stuttering affects the overt behavioral features of stuttering, primarily by tracking the frequency of syllables stuttered. Fishman (1937) was among the first researchers to investigate whether voluntary stuttering would lead to a significant reduction in stuttering frequency. In his study, five participants between 12 and 20 years of age were required to produce a voluntary stutter while reading sentences that was similar to their actual stutter. The words to be stuttered were underlined and varied from one to four words per sentence. For the two participants whose stuttering was characterized by inaudible sound prolongations or "blocks," the use of negative practice did not reduce stuttering frequency. In fact, for

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these participants, stuttering frequency and general physical tension increased after negative practice. For the remaining three participants, whose stuttering was characterized by initial sound, syllable, and word repetitions, a reduction in stuttering frequency was observed after the use of negative practice. Thus, Fishman concluded that the use of negative practice might be beneficial only for people whose stuttering is characterized by repetitions of initial sounds, syllables, and words and not for those whose stuttering is primarily characterized by blocks.

Meissner (1946) investigated whether the use of voluntary stuttering in the form of "bouncing" (i.e., easy, effortless repetition of syllables) would result in less stuttering for 24 participants who stutter and ranged in age from 13 to 22 years. Meissner compared their stuttering frequency in a reading passage wherein the participants were required to produce voluntary stuttering with their reading of a different passage without the production of voluntary stuttering. After each experimental condition (bouncing on 5%, 25%, and 50% of the words in the passage), a control passage was introduced where the participant was not required to produce voluntary stuttering. Stuttering frequency was higher in the control passages and lower in the passages where 25% and 50% of the words were disfluent. From these data we can deduce that voluntary stuttering in the form of effortless repetitions (i.e., Meissner, 1946) and in the form of imitation of the person's actual stuttering if their stuttering is characterized by repetitions as opposed to blocks (i.e., Fishman, 1937) leads to a significant reduction in stuttering frequency during reading; however, these studies required production of only one type of voluntary stuttering without allowing for a determination as to which form of voluntary stuttering may be more facilitative of fluency.

To that end, Sheehan and Voas (1957) explored the impact of three distinct types of voluntary stuttering on stuttering frequency: (a) imitation of the person's own stuttering, (b) easy, effortless repetition (i.e., bouncing), and (c) easy, effortless prolongation (i.e., "sliding"). Twenty-four participants (age range = 15–40 years) were divided into three groups specific to the type of voluntary stuttering they were required to produce. Each participant read four different passages six times; they were instructed to produce their assigned voluntary stuttering technique before words they feared they would produce disfluently and other random locations. Of the three groups, the participants who were required to imitate their actual stutter did not demonstrate a significant decrease in their stuttering. In contrast, the group that produced sliding and, to an even higher degree, the group that produced bouncing were significantly less disfluent across readings. However, participant use of voluntary stuttering was limited to the readings completed within this study, and no report of prior use or postparticipation transfer or maintenance of voluntary stuttering was noted.

Grossman (2008) extended the voluntary stuttering research to a context that would allow for a better understanding of the potential impact on the person's speech fluency

in conversational speech. Ten participants (age range = 17–40 years) were required to view a cartoon and retell the plot across three different conditions. For the baseline condition, participants had to retell the plot as they normally would, without using any techniques for stuttering. For the voluntary stuttering condition, participants were required to retell the plot using easy, effortless repetition on a word each time they saw a green light on the screen. A control condition included a light-only condition, where no voluntary stuttering was required. Stuttering frequency reportedly decreased for the voluntary stuttering condition only. Thus, Grossman's findings support the use of voluntary stuttering in the form of easy, effortless repetitions within a context that is more similar to conversation.

Relatively few studies have examined how voluntary stuttering affects the more covert affective and cognitive features of stuttering. In her exploration of voluntary stuttering, Grossman (2008) also provided a more in-depth exploration of the person who stutters' perception of the benefits of using voluntary stuttering through a qualitative analysis of interviews with six participants. All six reported that voluntary stuttering led to affective, behavioral, and cognitive changes. More specifically, they all noted reduced feelings of anxiety, fear, and frustration along with decreased stuttering frequency. Thus, the perceived benefits of voluntary stuttering appear to be significant and extend beyond overt behavioral features to include more covert affective and cognitive benefits. However, the small number of participants and the lack of specificity regarding the type of voluntary stuttering they used as well as when and where they used it limits the generalization of the benefits they purported to receive.

To date, only Grossman (2008) and Plexico, Manning, and DiLollo (2005) have examined the client's perceived benefit of the use of voluntary stuttering. They observed the progress from unsuccessful to successful management of stuttering among seven adults. The authors reported that self-therapy and behavioral change were among the six key factors that were critical to success of the participants. Moreover, participants reported that their self-therapy and behavioral change was intricately related to their use of voluntary stuttering outside of the clinical environment. Participants reported that the use of voluntary stuttering provided them with a personal sense of freedom, eliminated any potential for the listener being surprised by their speech, which in turn minimized any fear that the listener would somehow discover that they had been trying to hide that they stutter. They further noted that using this technique in situations that were unique to their daily lives was critical to their therapeutic success. Thus, findings reported by Plexico et al. and Grossman suggest increased client benefit when voluntary stuttering is used in the client's everyday life.

Limitations appear to exist with use of voluntary stuttering when the client only uses it within the clinic setting. Blomgren, Roy, Callister, and Merrill (2005) evaluated the clinical effectiveness of a 3-week intensive stuttering-management program wherein voluntary stuttering was

only one of several strategies used. Results revealed that reductions in stuttering frequency were not maintained but reductions in anxiety and avoidance behaviors were. These findings suggest that restricted use of voluntary stuttering within the clinic setting and over a short period of time will not likely lead to a significant reduction in stuttered speech. Thus, if a client's perception of benefit is related to stuttering frequency, then they will be less likely to perceive benefit of use. On the other hand, if a client's perception of benefit is related to a reduction in feelings of discomfort about their stuttering, then they would likely perceive meaningful benefit of use within the clinic environment even over a short period of time.

In summary, the data to support the effectiveness of voluntary stuttering are largely limited to reductions in stuttering frequency across reading passages as measured by the clinician; few studies have explored the client's perceived benefit of use. Further investigation of voluntary stuttering with respect to the client's point of view is needed to gain more comprehensive insight into the benefits and/or limitations of its use. In addition, given that prior studies have demonstrated that the type of voluntary stuttering produced can differentially affect the subsequent reduction in stuttering frequency, additional research is warranted to determine whether the clients' perspective regarding the benefits of use is distinctly related to whether their voluntary stuttering was an imitation of their own stuttering or if it was an effortless repetition. Also, with the findings that suggest use of voluntary stuttering outside of therapy may be critical to perceived benefit, investigation of the impact of location of use is warranted.

### Purpose of the Present Study

The present study examined the perceived benefits of voluntary stuttering on the affective, behavioral, and cognitive components of stuttering from the client's perspective rather than that of the clinician. We also explored whether perceived benefits are mediated by the (a) type of voluntary stuttering the person uses (i.e., one that is identical to their real stutter vs. easy bouncing or sliding/prolonging) and/or (b) whether the person uses the strategy outside the clinical environment.

## Method
### Survey Development

Two certified speech-language pathologists (i.e., an associate professor specializing in stuttering and a doctoral student with a primary interest in stuttering) and a graduate student completing her master's degree in speech-language pathology developed an initial survey containing 56 questions that was piloted with two persons who stutter. One pilot survey participant was a man (age 26 years) who was pursuing his doctoral degree in government, and the other was a man (age 32 years) pursuing his doctoral degree in speech-language pathology. Both reported a past history of a variety of intensive and long-term treatments for stuttering.

On the basis of the feedback they provided through this initial pilot, the survey was reduced to 45 questions (see Appendix for a copy of the revised final survey used in the present study) and was imported to Qualtrics, a generalized survey service that allows for creation of survey items, distribution of the survey, and data collection and storage and meets stringent information security requirements.

The majority of the survey contained multiple-choice questions, with some short answer questions and a dedicated space at the end for additional comments. The first set of survey questions (i.e., Questions 1–14) solicited demographic information such as chronological age, age of stuttering onset, gender, stuttering severity, and presence of any secondary characteristics. This first set also included questions regarding the etiology of the respondent's stuttering. If the person indicated the onset was neurogenic, the Qualtrics survey software was programmed to terminate survey participation at that time and inform the participant that there were no further questions. The second set of questions (i.e., Questions 15–27) were designed to determine the participant's familiarity with voluntary stuttering, the type of voluntary stuttering he or she used, how often and where he or she used it, and how difficult it was to use. If the participant indicated unfamiliarity with voluntary stuttering as a treatment technique, the Qualtrics survey software was programmed to stop the survey and inform the participant there were no further questions. The final set of questions (i.e., Questions 28–45) targeted responses regarding the affective, behavioral, and cognitive components of stuttering that, in theory, could be influenced by the use of voluntary stuttering.

### Survey Distribution

The survey was distributed via e-mail through Qualtrics to the following: (a) persons who stutter who were on a waitlist, were enrolled in, or had previously received therapy through the first author's treatment center, (b) persons who stutter who had enrolled in a research-participation mailing list distributed by the first author, (c) persons who stutter who were affiliated with the authors' local chapter of the National Stuttering Association (NSA), and/or (d) all members of the NSA electronic mailing list (which includes people who stutter and their loved ones as well clinicians, researchers, and other supporters of people who stutter). To increase the number of respondents, all e-mail recipients of the survey were specifically encouraged to forward their e-mail on to other persons who stutter (a recruitment procedure known as *snowball sampling*). The survey was available online for 4 weeks. Each participant had 1 week to complete the survey from the time he or she initiated it. An option was selected in Qualtrics to prevent respondents from being able to submit the survey more than once.

### Informed Consent

A cover letter approved by the University of Texas at Austin's institutional review board and the NSA's research committee was included in the survey e-mail. This

letter explicitly stated the purpose of the study and that all respondents should be 18 or older. Respondents were also informed that no identifying information would be requested of them and that the survey website, Qualtrics, would automatically assign their survey an arbitrary number that could not be traced to their e-mail address. The recruitment e-mail further stated that clicking on the survey link within the cover letter would indicate consent and direct them to the survey for completion.

### Respondents

A total of 397 surveys were returned; 191 were excluded for not meeting the inclusionary criteria. To be eligible to participate, respondents were required to be a person who stutters, to be at least 18 years of age, to have no prior or present cognitive, neurological, or psychological impairments, and to be familiar with voluntary stuttering. Of the 397 respondents, 4.5% ($n = 18$) were not persons who stutter, 2.3% ($n = 9$) were under 18 years old, 6% ($n = 24$) reported cognitive, neurological, and/or psychological impairments, and 27.7% ($n = 110$) were not familiar with voluntary stuttering. An additional 7.6% ($n = 30$) of the respondents were excluded because they terminated the survey prior to the completion of the question regarding whether they were familiar with voluntary stuttering. Thus, a total of 206 respondents (51.9%) were included in the final data corpus.

### Demographics

Of the 206 included respondents, 130 were men (63%). The respondents' mean age was 40.93 years and ranged from 18 to 85 years. Participants reported first beginning to stutter at an average age of approximately 5.14 years. Of the 206, there were 170 (83%) respondents who reported experiencing non–speech-related, secondary behaviors. Almost all (i.e., 195 of 206) respondents reported that they have had speech therapy for stuttering, but 80% (164 of 206) reported that they had not received speech therapy within the last 12 months (see Table 1 for a complete listing of participant demographic data).

## Results

Results for the present study are reported both descriptively and inferentially in the same manner as Abdalla and St. Louis (2014), who used a similarly designed survey to examine Arab school teachers' beliefs, knowledge, and reactions toward stuttering. In addition to a review of the descriptive data for the entire sample, chi-square tests of independence are provided with respect to whether the affective, behavioral, and cognitive benefits differed for those persons (a) who reported that their use of voluntary stuttering consisted of the imitation of their real stutters, as compared with those who produced voluntary stuttering different from their actual stutters (see the question regarding type of voluntary stuttering presented in Table 2) and (b) who reported a high use of voluntary stuttering outside of therapy, as compared with those who reported that they never used the technique outside of therapy (see the

**Table 1.** Demographic data ($N = 206$)

| Characteristic | *n* | % |
|---|---|---|
| Gender | | |
| Males | 130 | 63 |
| Females | 76 | 37 |
| Mean age in years (range) | 40.93 (18–85) | |
| Mean age in years of onset of stuttering (range) | 5.14 (1–15) | |
| Stuttering severity at time of survey[a] | | |
| Mild | 80 | 40 |
| Moderate | 71 | 35 |
| Moderate to severe | 43 | 22 |
| Severe | 5 | 3 |
| Speech therapy for stuttering at some point in life | | |
| Yes | 195 | 95 |
| No | 11 | 5 |
| Speech therapy for stuttering within last 12 months | | |
| Yes | 42 | 20 |
| No | 164 | 80 |

[a]There were seven respondents who reported that they did not stutter at the time of the survey and were not presented with the follow-up question regarding the severity of their stuttering; therefore, a total of 199 respondents responded to the "stuttering severity" question.

question regarding frequency of use outside of therapy presented in Table 2). The alpha level for statistical significance was set at $p \leq .05$. Furthermore, in order to meet the assumption for cell size in the chi-square test, all the five-item response categories were merged into two- or three-response categories. For example, in the case where the response categories included *strongly agree, agree, neither agree nor disagree, disagree,* and *strongly disagree,* three new response categories were created and included *agree, neither agree nor disagree,* and *disagree.*

### *Exposure and Use*

Respondents were asked to report where they first learned of the technique of voluntary stuttering. They were also asked questions regarding location of use, frequency of use, and type of voluntary stuttering used. Participants were also asked whether there were certain situations in which they would be more or less likely to use voluntary stuttering (see Table 2 for a summary of participant responses specific to these questions).

### *Affective Considerations*

#### Initial Feelings

A total of 205 respondents responded to the survey question regarding their initial feelings about voluntary stuttering: 87 (42%) respondents reported that they were uncomfortable, 62 (30%) stated they were somewhat uncomfortable, 30 (15%) were neutral, 18 (9%) reported being somewhat comfortable, and eight (4%) reported feeling comfortable. In addition, there were 187 respondents for

**Table 2.** Information regarding respondents' familiarity with and use of voluntary stuttering

| Use of voluntary stuttering | n | % |
|---|---|---|
| How they first learned about voluntary stuttering | | |
| In speech therapy | 129 | 63 |
| From another person who stutters | 8 | 4 |
| From text/online on-line resources | 32 | 16 |
| From support group | 22 | 10 |
| Other | 14 | 7 |
| Type of voluntary stuttering used | | |
| Imitation of participant's real stutter | 78 | 39 |
| Did not sound like participant's real stutters | 121 | 61 |
| Type of voluntary stuttering used for those whose voluntary stuttering did not imitate their actual stutters | | |
| Sound/syllable repetition, no tension | 55 | 47 |
| Prolongations/blocks, no tension | 14 | 12 |
| Both | 29 | 25 |
| Other | 20 | 16 |
| Location of use | | |
| Inside the therapy room only | 45 | 22 |
| Outside the therapy room only | 22 | 11 |
| Both inside/outside the therapy room | 90 | 44 |
| Have not used voluntary stuttering | 47 | 23 |
| Frequency of use outside of therapy | | |
| Daily | 10 | 5 |
| 2–3 times per week | 18 | 10 |
| Once per week | 14 | 8 |
| 2–3 times per month | 20 | 11 |
| Once per month | 8 | 4 |
| Less than once per month | 21 | 12 |
| Never | 91 | 50 |
| When they used voluntary stuttering | | |
| Frequently | 6 | 4 |
| Feared speaking situations | 17 | 9 |
| Only when I thought I might stutter | 24 | 13 |
| Feared speaking situations/might stutter | 31 | 17 |
| Never | 104 | 57 |
| Situations wherein use of voluntary stuttering was most beneficial[a] | | |
| Speaking on the phone | 45 | 25 |
| Public speaking | 53 | 30 |
| On feared words/sounds | 63 | 35 |
| Other | 29 | 16 |
| Voluntary stuttering was not useful | 72 | 40 |

*Note.* Most questions include fewer than 206 respondents because responses to each question were not required.

[a]Respondents were able to select more than one response for this question.

the survey question regarding "Situations where voluntary stuttering was initially too emotionally difficult to use." One hundred and thirteen (60%) of these respondents reported that when they first used voluntary stuttering it was too emotionally difficult for them to use in everyday situations; 36 (20%), in therapy and everyday situations; four (2%), in speech therapy; and 34 (18%) respondents reported that when they first used voluntary stuttering it was not emotionally difficult to use.

### Feelings After Use of Voluntary Stuttering

Seventy-five (42%) of the 177 respondents who answered our question regarding feelings after use of voluntary stuttering reported that voluntary stuttering reduced their

fear of stuttering, eight (5%) reported that voluntary stuttering eliminated their fear, 81 (45%) stated that the use had no impact on their fear, eight (5%) stated that the use increased their fear of stuttering, and five (3%) responded that voluntary stuttering significantly increased their fear of stuttering. When asked whether the use of voluntary stuttering made respondents feel more confident in their speech, 176 respondents reported the following: 24% ($n = 42$) agreed, 15% ($n = 27$) strongly agreed, 14% ($n = 25$) disagreed, 12% ($n = 21$) strongly disagreed, and 35% ($n = 61$) of respondents neither agreed nor disagreed.

### Inferential Analysis

The questions "Did your voluntary stuttering sound like your real stutters?" and "How often do you use voluntary stuttering outside of therapy?" were compared with the two survey items related to the affective components of stuttering after use of voluntary stuttering. Chi-square statistics are reported with degrees of freedom and sample sizes in parentheses, the Pearson chi-square value (rounded to decimal places), and the significance level. Detailed information regarding the contingency tables corresponding to the following chi-square analyses is presented on Table 3.

The relationship between whether voluntary stuttering consisted of imitation of real stutters and whether the use of voluntary stuttering has eliminated, reduced, increased, and/or had an impact on individuals' fear on stuttering was significant, $\chi^2(2, N = 177) = 17.35, p \leq .001$. Respondents who reported that the use of voluntary stuttering had reduced their fear of stuttering were more likely to report that their voluntary stuttering imitated their real stutters. Respondents who reported that the use of voluntary stuttering had no affect on their fear of stuttering were more likely to report that their voluntary stuttering did not imitate their real stutter. Similarly, respondents who reported that their voluntary stuttering sounded like their real stutters were more likely to report being more confident in their speech with the use of voluntary stuttering than participants whose voluntary stuttering did not sound like their real stutters, $\chi^2(2, N = 176) = 9.83, p = .01$.

Finally, respondents who reported that the use of voluntary stuttering has reduced their fear of stuttering were significantly more likely to respond that they had used voluntary stuttering outside of therapy than those who responded that they never used voluntary stuttering outside of therapy, $\chi^2(2, N = 177) = 58.76, p \leq .001$. Likewise, respondents who reported that the use of voluntary stuttering made them feel more confident in their speech were more likely to report that they used voluntary stuttering outside of therapy, $\chi^2(2, N = 176) = 70.75, p \leq .001$.

### *Behavioral Considerations*

#### Initial Use

One hundred and eighty-eight respondents replied to the question "When I first used voluntary stuttering it was too physically difficult to do … " Seventy-nine (42%)

**Table 3.** Type of voluntary stuttering and its use outside of therapy and their impact on the affective components of stuttering.

| | Similarity to actual/real stutters | | | | Use outside of therapy | | | |
| | Yes | | No | | Yes | | No | |
| Impact | *n* | % | *n* | % | *n* | % | *n* | % |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| On my fear of stuttering | | | | | | | | |
| Reduced | 47 | 57 | 36 | 43 | 68 | 82 | 15 | 18 |
| Increased | 5 | 38 | 8 | 62 | 2 | 15 | 11 | 85 |
| No impact | 20 | 25 | 61 | 75 | 21 | 26 | 60 | 74 |
| | $\chi^2(2, N = 177) = 17.35, p \leq .001$ | | | | $\chi^2(2, N = 177) = 58.76, p \leq .001$ | | | |
| On my speech confidence | | | | | | | | |
| Agree | 38 | 55 | 31 | 45 | 61 | 88 | 8 | 12 |
| Neither agree nor disagree | 21 | 34 | 40 | 66 | 25 | 41 | 36 | 59 |
| Disagree | 13 | 28 | 33 | 72 | 5 | 11 | 41 | 89 |
| | $\chi^2(2, N = 176) = 9.83, p = .01$ | | | | $\chi^2(2, N = 176) = 70.75, p \leq .001$ | | | |

reported that when they first used voluntary stuttering, it was too physically difficult to use in everyday situations; 32 (17%), in speech therapy and everyday situations; four (2%), in speech therapy; and 73 respondents (39%) reported that voluntary stuttering was not physically difficult to use when they first used it.

### After Use

Ninety-one of 177 (51%) respondents reported that they had used voluntary stuttering in order to practice fluency shaping and/or stuttering modification techniques in therapy, whereas 86 of 177 (49%) had not. When asked whether they had used voluntary stuttering to get out of an actual stutter, 61 of 182 (34%) respondents answered yes, and 121 of 182 (66%) respondents reported that they had not used voluntary stuttering for that purpose.

For the question "The use of voluntary stuttering helped me to stutter less," 37 of 181 (20%) respondents agreed that the use of voluntary stuttering helped them to stutter less, 18 (10%) strongly agreed, 28 (15%) disagreed, 27 (15%) strongly disagreed, and 71 respondents (40%) reported that they neither agreed nor disagreed. Regarding whether voluntary stuttering decreased the tension they feel during speech, 61 of 182 (34%) respondents reported that they agreed; 25 (14%), that they strongly agreed; 28 (15%), that they disagreed; 21 (12%), that they strongly disagreed; and 47 respondents (25%) reported that neither agreed nor disagreed. In addition, when asked whether voluntary stuttering had decreased any non–speech-related, secondary behaviors during moments of stuttering, 36 of 183 (20%) respondents agreed with this statement, 16 (8%) strongly agreed, 36 (20%) disagreed, 24 (13%) strongly disagreed, and 71 respondents (39%) neither agreed nor disagreed. The final survey item regarding the behavioral components of stuttering asked participants whether voluntary stuttering had a positive, long-term impact on the severity of their stuttering. Of the 175 respondents for this question, 35 (20%) agreed, 22 (13%) strongly agreed, 28 (16%) disagreed, 25 (14%) strongly disagreed, and 65 respondents (37%) neither agreed nor disagreed.

### Inferential Analysis

Respondents whose stuttering did not imitate their actual stutter were more likely to disagree with the statement that the use of voluntary stuttering decreased the physical tension they felt during speech, $\chi^2(2, N = 182) = 10.67, p \leq .001$, compared with the individuals whose voluntary stuttering imitated their actual stutter. On the other hand, respondents whose voluntary stuttering imitated their actual stutter were more likely to agree that the use of voluntary stuttering helped them to stutter less, $\chi^2(2, N = 181) = 6.75, p = .03$, as well as that voluntary stuttering has had a positive, long-term impact on the severity of their stuttering, $\chi^2(2, N = 175) = 9.10, p = .01$.

A significant relationship, $\chi^2(2, N = 182) = 47.16, p \leq .001$, was also found between participant responses to the question regarding the frequency of use of voluntary stuttering outside of therapy and their responses to the question "Voluntary stuttering decreased the physical tension I typically felt during speech," with respondents who used voluntary stuttering outside of therapy being more likely to agree with this statement. Similarly, respondents who reported that they used voluntary stuttering outside of therapy were more likely to agree that the use of voluntary stuttering had decreased their frequency of stuttering, $\chi^2(2, N = 181) = 40.87, p \leq .001$, and that voluntary stuttering has had a positive, long-term impact on the severity of their stuttering, $\chi^2(2, N = 175) = 35.97, p \leq .001$. Detailed information regarding the aforementioned chi-square values as well as their contingency tables are presented in Table 4.

### Cognitive Considerations
#### Initial Thoughts

Respondents were asked to report whether when first learning voluntary stuttering, they thought it would be too difficult to use. Of the 191 respondents, 132 (69%) thought it would be too difficult to use in everyday situations, 26 (14%) thought it would be too difficult in therapy and everyday situations, three (1%) thought it would be too

**Table 4.** Type of voluntary stuttering and its use outside of therapy and their impact on the behavioral components of stuttering.

| Impact | Similarity to actual/real stutters | | | | Use outside of therapy | | | |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Yes | | No | |
| | *n* | % | *n* | % | *n* | % | *n* | % |
| Decreased physical tension | | | | | | | | |
| Agree | 44 | 51 | 42 | 49 | 66 | 77 | 20 | 23 |
| Neither agree nor disagree | 19 | 40 | 28 | 60 | 14 | 30 | 33 | 70 |
| Disagree | 11 | 22 | 38 | 78 | 11 | 22 | 38 | 78 |
| | $\chi^2(2, N = 182) = 10.67, p \leq .001$ | | | | $\chi^2(2, N = 182) = 47.16, p \leq .001$ | | | |
| Helped me to stutter less | | | | | | | | |
| Agree | 30 | 55 | 25 | 45 | 46 | 84 | 9 | 16 |
| Neither agree nor disagree | 27 | 38 | 44 | 62 | 32 | 45 | 39 | 55 |
| Disagree | 17 | 31 | 38 | 69 | 13 | 24 | 42 | 76 |
| | $\chi^2(2, N = 181) = 6.75, p = .03$ | | | | $\chi^2(2, N = 181) = 40.87, p \leq .001$ | | | |
| Positive impact on the severity of my stuttering | | | | | | | | |
| Agree | 32 | 56 | 25 | 44 | 47 | 82 | 10 | 18 |
| Neither agree nor disagree | 25 | 38 | 40 | 62 | 30 | 46 | 35 | 54 |
| Disagree | 15 | 28 | 38 | 72 | 14 | 26 | 39 | 74 |
| | $\chi^2(2, N = 175) = 9.10, p = .01$ | | | | $\chi^2(2, N = 175) = 35.97, p \leq .001$ | | | |

difficult in speech therapy, and 30 (16%) reported that voluntary stuttering was not difficult to use.

**Impact on Awareness of Stuttering**

Two survey items investigated how helpful respondents thought voluntary stuttering was in making them more aware of their stuttering. Of the 186 respondents, 62 (33%) reported that voluntary stuttering was either helpful or very helpful in making them more aware of how they stutter, whereas 28 participants (15%) reported that it was not very helpful, and 29 (16%) reported that it was not helpful at all. Sixty-seven respondents (36%) were neutral as to whether the use of voluntary stuttering was helpful in making them more aware of how they stutter. The survey further investigated the perceived helpfulness of voluntary stuttering in making respondents more aware of secondary behaviors they experienced in a moment of stuttering. One hundred eighty-four participants responded to this item, with 13% (*n* = 24) reporting that it was very helpful, 22% (*n* = 40) reporting that it was helpful, 16% (*n* = 30) reporting that it was not very helpful, 17% (*n* = 31) that it was not helpful at all, and 32% (*n* = 59) providing a neutral response.

**Thoughts After Use**

Approximately half the respondents (91 of 177; 51%) reported that they used voluntary stuttering to practice fluency shaping and/or stuttering modification techniques in therapy. Thirty-three of these 91 respondents (37%) further reported that voluntary stuttering was helpful when practicing fluency shaping and/or stuttering modification techniques in therapy, 27 (30%) answered that it was very helpful, 17 (19%) were undecided, 10 (11%) reported that it was not helpful, and four (3%) reported that it was not helpful at all. Sixty-one of 180 participants (34 %) responded yes when asked whether they have used voluntary stuttering

to get out of an actual stutter. Of those 61 respondents, 64% (*n* = 39) reported that it somewhat helped them to get out of a stutter, 25% (*n* = 15) reported that it helped them to get out of a stutter, 8% (*n* = 5) reported that it did not help them to get out of a stutter, and 3% (*n* = 2) reported that voluntary stuttering made their stuttering worse.

When the respondents were asked whether voluntary stuttering made them think differently about their stuttering, 58 of 179 (32%) agreed, 25 (15%) strongly agreed, 20 (11%) disagreed, 18 (10%) strongly disagreed, and 58 respondents (32%) neither agreed nor disagreed. One hundred and seventy-six respondents answered whether they thought that the use of voluntary stuttering helped make their conversational partner feel more comfortable. The majority (95; 54%) neither agreed nor disagreed; 27 (15%) agreed, eight (5%) strongly agreed, 26 (15%) disagreed, and 20 (11%) strongly disagreed. When asked whether voluntary stuttering was a good way to advertise (or self-disclose) being a person who stutters, 175 participants responded as follows: 49 (28%) agreed, 39 (22%) strongly agreed, 18 (10%) disagreed, 17 (10%) strongly disagreed, and 52 (30%) neither agreed nor disagreed. Finally, when asked whether voluntary stuttering affected their avoidance behaviors, the majority (93 of 175; 53%) reported that voluntary stuttering had not reduced their avoidance of situations or sounds/words, 17 (10%) reported that it had reduced their avoidance in situations, 11 (6%) reported it reduced their avoidance of sounds/words, 50 (29%) reported it reduced their avoidance of both situations and sounds/words, and four (2%) reported "other" (e.g., facing life with courage).

**Inferential Statistics**

Respondents who reported that their voluntary stuttering did not sound like their real stutters, when compared with those who reported that it did, were more likely to disagree with the statements "Voluntary stuttering made me

think differently about my stuttering," $\chi^2(2, N = 179) = 7.11$, $p = .03$; "Voluntary stuttering was a good way to advertise that I was a person who stutters," $\chi^2(2, N = 175) = 13.15$, $p \leq .001$; and "Voluntary stuttering has reduced my avoidance of sounds/words and situations," $\chi^2(1, N = 175) = 16.67$, $p \leq .001$.

Finally, respondents who reported that they used voluntary stuttering outside of therapy were more likely to agree with the statement that voluntary stuttering made them think differently about their stuttering, $\chi^2(2, N = 179) = 51.62$, $p \leq .001$, and helped make the person they were speaking with feel more comfortable, $\chi^2(2, N = 176) = 21.51$, $p \leq .001$. They were also more likely to claim that voluntary stuttering was a good way to advertise that they were a person who stutters, $\chi^2(2, N = 175) = 45.46$, $p \leq .001$, and more likely to report that voluntary stuttering has reduced their avoidance of sounds/words/situations, $\chi^2(1, N = 175) = 54.56$, $p \leq .001$ (see Table 5 for detailed information regarding the contingency tables corresponding these chi-square analyses).

### Overall Perception of Voluntary Stuttering

Some survey items were used to determine respondents' overall perception of voluntary stuttering. Respondents were asked whether they believed that this technique was an important part of speech therapy. Fifty-five of 175 respondents (31%) agreed that voluntary stuttering was an important part of speech therapy, 44 (25%) strongly agreed, 15 (9%) disagreed, 12 (7%) strongly disagreed, and 49 (28%) answered "neutral" when asked whether voluntary

stuttering was an important part of speech therapy. In addition, 93 of 175 respondents (53%) agreed that voluntary stuttering is something people who stutter should continue to use when they are not in speech therapy, 17 (10%) disagreed that it should continue to be used, and 65 respondents (37%) neither agreed nor disagreed. Finally, 175 respondents provided answers as to whether and to what degree voluntary stuttering had improved their overall quality of life. Thirty-eight (22%) agreed, 16 (9%) strongly agreed, 24 (14%) disagreed, 30 (17%) strongly disagreed, and 67 (38%) neither agreed nor disagreed with the statement that voluntary stuttering had improved their overall quality of life.

### Inferential Statistics

Respondents who reported their voluntary stuttering imitated their real stutters were more likely to agree that voluntary stuttering is an important part of speech therapy, $\chi^2(2, N = 175) = 14.18$, $p \leq .001$, and that the use of voluntary stuttering has improved their overall quality of life, $\chi^2(2, N = 175) = 13.13$, $p \leq .001$. Those same respondents were also more likely to agree that voluntary stuttering is something people should use when not in therapy, $\chi^2(2, N = 175) = 8.25$, $p = .02$.

Respondents who used voluntary stuttering outside of therapy were more likely to respond positively when asked whether voluntary stuttering is something people should do when not in therapy, $\chi^2(2, N = 175) = 64.13$, $p \leq .001$, whether voluntary stuttering has improved their overall quality of life, $\chi^2(2, N = 175) = 45.51$, $p \leq .001$, and whether voluntary stuttering is an important part of speech therapy,

**Table 5.** Type of voluntary stuttering and its use outside of therapy and their impact on the cognitive components of stuttering.

| Impact | Similarity to actual/real stutters | | | | Use outside of therapy | | | |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Yes | | No | |
| | *n* | % | *n* | % | *n* | % | *n* | % |
| **Impact on the perception of my stuttering** | | | | | | | | |
| Agree | 42 | 51 | 41 | 49 | 65 | 78 | 18 | 22 |
| Neither agree nor disagree | 21 | 36 | 37 | 64 | 21 | 36 | 37 | 64 |
| Disagree | 10 | 26 | 28 | 74 | 5 | 13 | 33 | 87 |
| | $\chi^2(2, N = 179) = 7.11$, $p = .03$ | | | | $\chi^2(2, N = 179) = 51.62$, $p \leq .001$ | | | |
| **Impact on conversational partner** | | | | | | | | |
| Agree | 19 | 54 | 16 | 46 | 27 | 77 | 8 | 23 |
| Neither agree nor disagree | 36 | 38 | 59 | 62 | 52 | 55 | 43 | 45 |
| Disagree | 17 | 37 | 29 | 63 | 12 | 26 | 34 | 74 |
| | $\chi^2(2, N = 176) = 3.25$, $p = .20$ | | | | $\chi^2(2, N = 176) = 21.51$, $p \leq .001$ | | | |
| **Good way to self-disclose** | | | | | | | | |
| Agree | 48 | 55 | 40 | 45 | 67 | 76 | 21 | 24 |
| Neither agree nor disagree | 14 | 27 | 38 | 73 | 19 | 37 | 33 | 63 |
| Disagree | 10 | 29 | 25 | 71 | 5 | 14 | 30 | 86 |
| | $\chi^2(2, N = 175) = 13.15$, $p \leq .001$ | | | | $\chi^2(2, N = 175) = 45.46$, $p \leq .001$ | | | |
| **Reduced my avoidance of …** | | | | | | | | |
| Situations/sounds/words | 47 | 57 | 35 | 43 | 67 | 82 | 15 | 18 |
| Has not reduced my avoidance of anything | 25 | 27 | 68 | 73 | 24 | 26 | 69 | 74 |
| | $\chi^2(1, N = 175) = 16.67$, $p \leq .001$ | | | | $\chi^2(1, N = 175) = 54.56$, $p \leq .001$ | | | |

$\chi^2(2, N = 175) = 42.47$, $p \leq .001$ (see Table 6 for further information).

## Discussion

The purpose of the present study was to explore the client perspective on the affective, behavioral, and cognitive benefits of voluntary stuttering. We also considered whether two key factors—type of voluntary stuttering used and location of use—were uniquely associated with the perceived impact of voluntary stuttering. Results revealed that the perceived benefits are significantly associated with these two factors.

### Initial Feelings, Emotions, and Thoughts

Regarding initial feelings toward voluntary stuttering, the large majority of respondents reported that they were uncomfortable to some degree and that they felt it was too emotionally difficult to do. The majority also reported that they thought voluntary stuttering would be too physically difficult to produce and that they initially thought stuttering on purpose would be difficult to do on a regular basis. However, these feelings of discomfort and perceptions of difficulty dissipated for nearly half of the respondents subsequent to initial use, suggesting that the act of engaging in voluntary stuttering is a critical first step to understanding the potential benefit(s) and to promoting future use. These findings suggest that clinicians should be aware that their clients will likely be skeptical and may even resist using voluntary stuttering. To address any initial hesitation and/or skepticism regarding use of voluntary stuttering, clinicians need to stress that the first step toward perceiving benefit(s) from use of voluntary stuttering is simply using the strategy. Data from the present study suggest that after that critical first step, persons who stutter may experience a shift in

their feelings, behaviors, and thoughts regarding additional future use.

### Type of Voluntary Stuttering Used

Perhaps more important than initial use is the manner in which the person voluntary stutters. That is, for those respondents who produced voluntary stutters that more closely matched their real stutters, the use of voluntary stuttering was considered to be significantly more fear reducing as well as avoidance reducing when compared with those persons who reported use of easy bouncing and prolongations. Respondents who produced voluntary stutters that were more like their real stutters were also more likely to report that the use of voluntary stuttering made them think differently about their speech and increased their confidence. In addition, persons who engaged in voluntary stuttering that imitated their real stutters were more likely to report that voluntary stuttering decreased the physical tension they felt during speech. They were also more likely to report that the use of voluntary stuttering helped them to stutter less and that the use of this strategy has contributed to a long-term reduction in their stuttering severity. These respondents were also more likely to report that the use of voluntary stuttering improved their overall quality of life. Therefore, it is not surprising that these respondents were also more likely to indicate that voluntary stuttering is an important part of speech therapy and should continue to be used posttherapy.

Past research regarding the impact of voluntary stuttering has been largely limited to the use of bouncing and prolongation and to the related reduction in stuttering frequency (e.g., Meissner, 1946; Fishman, 1937; Sheehan & Voas, 1957). Sheehan and Voas (1957) directly compared the use of voluntary stutters that closely matched real stutters with the use of easy repetitions and prolongations, with

**Table 6.** Type of voluntary stuttering and its use outside of therapy and their impact on the overall perceptions of stuttering.

| | Similarity to actual/real stutters | | | | Use outside of therapy | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Yes | | No | | Yes | | No | |
| | *n* | % | *n* | % | *n* | % | *n* | % |
| Important in speech therapy | | | | | | | | |
| Agree | 52 | 53 | 47 | 47 | 72 | 73 | 27 | 27 |
| Neither agree nor disagree | 10 | 20 | 39 | 80 | 16 | 33 | 33 | 67 |
| Disagree | 10 | 37 | 17 | 63 | 3 | 11 | 24 | 89 |
| | $\chi^2(2, N = 175) = 14.18, p \leq .001$ | | | | $\chi^2(2, N = 175) = 42.47, p \leq .001$ | | | |
| Improved my quality of life | | | | | | | | |
| Agree | 33 | 61 | 21 | 39 | 46 | 85 | 8 | 15 |
| Neither agree nor disagree | 23 | 34 | 44 | 66 | 34 | 51 | 33 | 49 |
| Disagree | 16 | 30 | 38 | 70 | 11 | 20 | 43 | 80 |
| | $\chi^2(2, N = 175) = 13.13, p \leq .001$ | | | | $\chi^2(2, N = 175) = 45.51, p \leq .001$ | | | |
| Important to use when not in therapy | | | | | | | | |
| Agree | 47 | 51 | 46 | 49 | 74 | 80 | 19 | 19 |
| Neither agree nor disagree | 18 | 28 | 47 | 72 | 17 | 26 | 48 | 74 |
| Disagree | 7 | 41 | 10 | 59 | 0 | 0 | 17 | 100 |
| | $\chi^2(2, N = 175) = 8.25, p = .02$ | | | | $\chi^2(2, N = 175) = 64.13, p \leq .001$ | | | |

results suggesting that the latter leads to significant reductions in disfluency. However, their study as well as others have been limited to reading tasks, with the client's perception of benefit(s) not included. Grossman's (2008) qualitative analysis lends support to the present study. She stated that among the six persons who stutter whom she interviewed at length, the type of voluntary stuttering used did appear to have a differential impact, with imitations of authentic stutters reportedly being more likely to contribute to desensitization.

Although additional research is warranted specific to the type of voluntary stuttering used and the related qualitative and quantitative benefits, results from the present study suggest that for voluntary stuttering to be perceived as desensitizing in nature, the stutters produced need to be as authentic as possible. Thus, clinicians need to be aware that the data in the current study suggest that, if the behavior produced is markedly different from the client's typical stuttering behaviors, the client may not find this strategy to be fear reducing and/or to increase confidence across speaking situations wherein he or she might stutter.

## Use of Voluntary Stuttering Beyond Clinical Environment

In addition to the type of voluntary stutter, the location where respondents used voluntary stuttering affected their perceived benefits. Respondents who used voluntary stuttering outside the therapy room were more likely to respond that voluntary stuttering was fear reducing, avoidance reducing, and also confidence boosting. They were also more likely to agree that the use of voluntary stuttering had decreased their frequency of stuttering, physical tension or non–speech-related, secondary behaviors they experienced during moments of stuttering and that use of voluntary stuttering has had a positive, long-term impact on the severity of their stuttering. Respondents who reported that they used voluntary stuttering outside of therapy were also more likely to perceive that it helped them to think differently about their speech. Moreover, they were more likely to indicate that voluntary stuttering was a good technique for advertising stuttering and that it helped to make the listener to feel more comfortable. These respondents were also more likely to report that voluntary stuttering improved their overall quality of life. Given these perceived benefits, it is not surprising that those respondents who used voluntary stuttering outside of the therapeutic environment in situations unique to their everyday life were more likely to report that voluntary stuttering is an important part of speech therapy and a tool that should be used posttherapy. Perhaps Blomgren et al. (2005) may have been more likely to observe significant, lasting reductions in stuttering frequency had the therapy program focused more exclusively on voluntary stuttering, particularly productions that are comparable to the participants' authentic stuttering, and had the program included continued focus on daily practice beyond the clinical environment.

According to Van Riper (1973), when persons who stutter purposefully expose their stuttering, they experience a great sense of relief. Plexico et al. (2005) further noted that the use of voluntary stuttering allows persons who stutter to feel a sense of freedom because it reduces the fear that their stuttering will be exposed to their listeners. By voluntarily producing stuttered speech, persons who stutter demonstrate acknowledgement and acceptance of their stuttering. Results from the present study suggest that to perceive the aforementioned benefits, the use of voluntary stuttering must extend beyond the clinical environment. Moreover, clinicians need to be aware that practicing voluntary stuttering solely within the clinic setting may not facilitate the desensitization and related positive client perceptions regarding the benefits of its use.

### Additional Considerations

The majority of participants who initiated (but did not necessarily complete) the present survey (294 of 316; 93%) reported receiving speech therapy at some point in their lives. However, almost one third (110 of 316; 35%) reported that they were unfamiliar with voluntary stuttering. This apparent lack of exposure to voluntary stuttering is disconcerting, particularly in light of the present study's findings, which show affective, behavioral, and cognitive benefits related to its use. The exact reasons for this lack of knowledge regarding such a beneficial tool is unknown, but survey terminology may have affected participant responses. Some participants may have been unfamiliar with the term *voluntary stuttering*. Instead, they may have been introduced to this strategy through the use of terms such as *bouncing, sliding,* and/or *pseudostuttering*. Thus, there may have been more respondents who were in fact exposed to this strategy than were captured in the data of the present study.

A more plausible explanation for this lack of exposure to voluntary stuttering is that perhaps the speech-language pathologists who worked with these respondents were either not familiar and/or not comfortable with using voluntary stuttering themselves and/or with asking their clients to use it. In fact, the clinician's comfort level with modeling voluntary stuttering has been touted as the critical motivating factor to bolstering the client's willingness to use this strategy (Manning, 2010). For this reason, researchers (e.g., Ham, 1990b; Lohman, 2008; Mayo, Mayo, & Williams, 2006; Rami, Kalinowski, Stuart, & Rastatter, 2003) have explored the benefit of clinicians engaging in voluntary stuttering. Although the results have demonstrated that the act of voluntary stuttering provides the clinician with valuable insight into the affective, behavioral, and cognitive correlates of stuttering, findings have consistently shown that clinicians report being uncomfortable with voluntary stuttering. Furthermore, clinicians have consistently reported fear, anxiety, embarrassment, and frustration in regard to using voluntary stuttering in real-life situations and a strong desire to avoid such activities. It would be interesting to see whether clinicians, like nearly

half of the respondents in the current study, might demonstrate a pattern of initial discomfort with voluntary stuttering with improved comfort over time. If this is in fact the case, educational efforts aimed at increasing clinician comfort with voluntary stuttering may directly result in them being more inclined to discuss the value of this technique with their clients.

Alternatively, clinicians may be hesitant to use this strategy with their clients given that published direct evidence to support use is lacking. The present preliminary results suggest significant benefits for clients who use voluntary stuttering, but further exploration is needed. To that end, we encourage clinicians to analyze and formally report whether use of this classic desensitization strategy leads to measurable increased acceptance, decreased avoidance, and an enhanced communication attitude in persons who stutter. We also encourage analysis of potential relationships among treatment history, severity of stuttering, and measures of resiliency. We limited our analyses to what has been previously reported to be potential outcomes of use but there is a significant need for additional examination of outcomes as well as factors unique to the individual that may moderate these outcomes. Perhaps, with additional positive empirical support in the literature, more clinicians may choose to use this technique, which in turn would lead to increased knowledge of the benefits of this strategy among persons who stutter.

## Conclusion

Voluntary stuttering is a strategy that is highly recommended in the clinical literature but has minimal empirical data regarding treatment outcomes. Results from the present survey of people who stutter suggest that the perceived benefits of voluntary stuttering are associated with the type of voluntary stuttering produced and whether it is used outside the clinical environment. Clinicians should be aware that most clients are likely to consider voluntary stuttering to be too emotionally and too physically difficult to do but that these feelings are significantly reduced for many upon initial use. Thus, a clinician should explain to the client that the perceived benefits of this technique can only be achieved through its use and that with increased frequency of use, especially outside of the clinical setting, voluntary stuttering has the potential to garner greater results. Moreover, clinicians should be aware that having a client imitate his or her own stuttering may be perceived as more desensitizing and more beneficial in nature. Finally, clinicians should facilitate the use of voluntary stuttering outside of the therapy room. Together, these considerations can facilitate maximum desensitization and significantly affect the person who stutters' perceived benefits of the use of voluntary stuttering.

## Acknowledgments

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**Appendix** (p. 1 of 5)

Survey Questions

1. Are you age 18 or over?
Yes
No

2. What is your exact age in years?

3. What is your gender?
Male
Female

4. Have you ever stuttered?
Yes
No

5. Do you currently stutter?
Yes
No

6. What is the severity of your stuttering now?
Mild
Moderate
Moderate to severe
Severe

7. Do you experience any non–speech-related, secondary behaviors in a moment of stuttering? (e.g., eye blinking, jaw tension, looking away, finger tapping)
Yes
No

8. The non–speech-related, secondary behaviors I experience when I am stuttering include … (Choose all that apply)
Eye blinking
Jaw tension
Looking away
Finger tapping
Other (please specify)

9. Do you actively try to avoid or conceal your stuttering by substituting words, avoiding situations, persons, etc.?
Yes
No

10. Do you have any cognitive, neurological, or physical impairment and/or have you sustained any injuries that might uniquely contribute to your stuttering?
Yes
No

11. To the best of your knowledge, at what age did you first begin to stutter?

12. Over the course of your life, have you ever had speech therapy for stuttering?
Yes
No

13. Have you had speech therapy for stuttering at any time within the last 12 months?
Yes
No

14. If it has been longer than 12 months, please indicate how long it has been (in years) since you had speech therapy for stuttering. (e.g., 3 years)

15. Are you familiar with voluntary stuttering?
Yes
No

16. How did you first learn about voluntary stuttering?
In speech therapy
From another person who stutters
From text and/or online resources
In a support group for people who stutter
Other (please specify)

17. What were your initial feelings about voluntary stuttering?
I was comfortable
I was somewhat comfortable
Neutral
I was somewhat uncomfortable
I was uncomfortable

18. Where have you used voluntary stuttering?
Inside the therapy room only
Outside the therapy room only
Both inside and outside the therapy room
I have not used voluntary stuttering anywhere

19. Did you use voluntary stuttering to practice fluency shaping and/or stuttering modification techniques in therapy?
Yes
No

20. How helpful was voluntary stuttering when practicing fluency shaping and/or stuttering modification techniques in therapy?
Very helpful
Helpful
Not very helpful
Not helpful at all

21. Have you used voluntary stuttering to get out of an actual stutter?
Yes
No

22. Voluntary stuttering …
Really helped me to get out of the stutter
Somewhat helped me to get out of the stutter
Did not help me to get out of the stutter
Made my stutter worse

23. Did your voluntary stuttering sound like your real stutters?
Yes
No

24. My voluntary stuttering sounded like_____. (Answer this question only if your voluntary stuttering was not made to sound like your actual stutters)
Sound and/or syllable repetition (also called *bouncing*) without tension
Prolongations/blocks (with or without sound) and without tension
Both
Other (Please specify)

25. When I first learned about voluntary stuttering, I thought it would be too difficult to do …
In speech therapy
In everyday situations
In therapy and everyday situations
Voluntary stuttering was not difficult to do

26. When I first used voluntary stuttering, it was too physically difficult to do …
In speech therapy
In everyday situations
In therapy and everyday situations
Voluntary stuttering was not difficult to do

27. When I first used voluntary stuttering, it was too emotionally difficult to do …
In speech therapy
In everyday situations
In therapy and everyday situations
Voluntary stuttering was not difficult to do

28. How helpful was voluntary stuttering in making you aware of how you stutter?
Very helpful
Helpful
Neutral
Not very helpful
Not helpful at all

29. How helpful was voluntary stuttering in making you aware of any non–speech-related, secondary behaviors you experience in a moment of stuttering? (e.g., eye blinking, jaw tension, looking away, finger tapping)
Very helpful
Helpful
Neutral
Not very helpful
Not helpful at all

30. Voluntary stuttering has decreased any non–speech-related, secondary behaviors I experience during moments of stuttering. (e.g., eye blinking, jaw tension, looking away, finger tapping)
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

31. Voluntary stuttering decreased the physical tension I typically felt during speech.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

32. How often did you use voluntary stuttering outside of therapy?
Daily
2–3 times per week
Once a week
2–3 times per month
Once a month
Less than once a month
Never

33. When do you choose to use voluntary stuttering?
Frequently
Only in feared speaking situations
Only when I thought I might stutter
In feared speaking situations and when I thought I might stutter
Not at all

34. The use of voluntary stuttering helped me to stutter less.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

Survey Questions

35. Voluntary stuttering made me think differently about my stuttering.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

36. I have found voluntary stuttering useful … (Choose all that apply)
When speaking on the telephone
When public speaking
When saying feared words and/or sounds
Other (please specify)
I have not found voluntary stuttering useful

37. The use of voluntary stuttering has …
Eliminated my fear of stuttering
Reduced my fear of stuttering
Increased my fear of stuttering
Significantly increased my fear of stuttering
Had no impact on my fear of stuttering

38. The use of voluntary stuttering made me feel more confident in my speech.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

39. When I used voluntary stuttering, it helped make the person I was speaking with feel more comfortable.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

40. Voluntary stuttering was a good way to advertise (or self-disclose) that I am a person who stutters.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

41. Voluntary stuttering is an important part of speech therapy.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

42. Voluntary stuttering has reduced my avoidance of …
Situations
Sounds/words
Situations and sounds/words
Other (please specify)
It has not reduced my avoidance of anything

43. Voluntary has had a positive, long-term impact on the severity of my stuttering.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

Survey Questions

44. Voluntary stuttering has improved my overall quality of life.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

45. Voluntary stuttering is something people should continue to use when not in speech therapy.
Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

46. Additional comments: