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eHearsay: Statement of Purpose

eHEARSAY, the electronic journal of the Ohio Speech-Language-Hearing Association, is designed to address the professional development needs of the state association.

Issues are may be developed around specific themes and can include invited papers, research articles, review, tutorial, research forum, letter to the editor, clinical focus/forum or viewpoints.

eHEARSAY is published as a web journal annually. Continuing education credits will be available for each issue.
On behalf of OSLHA, I’d like to welcome you to the 2013 annual issue of eHearsay, the on-line journal of the Ohio Speech-Language-Hearing Association.

This is also my first journey into publications as a Journal Editor. I’m excited to continue and expand upon the on-line journal format that was started by Laura Kretschmer and Monica Gordon Pershey.

While some of our issues may be theme based, we are including manuscripts that are on different topics as well. However, this journal is for you, the OSLHA member. I want to hear from you – what do you want to know more about? What kinds of information would be helpful to you in your area of practice?

I’d also like to encourage YOU to submit articles to eHearsay. It’s an easy way to get your feet wet in the publishing world. If you presented a poster or gave a lecture at OSLHA, ASHA or another convention – you could turn it into an informative article for the membership. If you are faculty and have your students complete a review of a specific topic (e.g., child language, dysphagia, voice) emphasizing evidence based reviews, consider submitting them as a clinical forum. If you have conducted a survey and want to share the results, submit a manuscript.

I just read a great quote (thanks to Scott Palasik PhD, CCC-SLP from the University of Akron) – “We all are standing on the shoulders of giants”. A contemporary interpretation of this quote suggests we can develop our future intellectual pursuits by understanding and building on the work (successes and failures; research, anecdotal stories, single case studies) of those that have gone before us. I want eHearsay to provide the impetus for your professional growth.

Lastly, don’t forget you can earn FREE CEU’s just by reading the articles, answering the multiple choice questions and submitting your answers on-line.

I hope you enjoy this issue. Feel free to contact me at laurie.sheehy@utoledo.edu

Sincerely

Laurie M. Sheehy M.Ed. CCC-SLP
eHearsay Journal Editor
Fluency Disorders

I would like to thank OSLHA for asking me to be the guest editor for the 2013 eHearsay. The topic for this issue is Fluency Disorders. Over the past 17 years, I have worked exclusively as a clinician, educator, and researcher on this topic. I believe that it is critical that speech-language pathologists (SLPs) be provided with a variety of opportunities to learn more about fluency disorders. In this way, SLPs can improve the services that they are able to provide adults, adolescents, and children who have fluency disorders. I am thankful that this issue will help in providing another opportunity for clinicians to learn about fluency disorders, especially stuttering.

This issue provides the reader opportunities to read articles that focus on both research and clinical tutorials. First, my paper focusing on SLPs’ experiences and knowledge related to stuttering sets the stage for the rest of the papers in this issue. Stephanie Hughes provides a report of interesting research about the beliefs that people who do not stutter have regarding the cause of stuttering, and how these findings might related to clinical intervention. The next paper, by Lee Ellis and Laurie Sheehy, is an interesting account of fluency and cognitive therapy for an individual recovering from Toxic Metabolic Encephalopathy. Charlie Hughes and his colleague discuss a stuttering exploring how adolescents who stutter communicate with friends and family about their stuttering. In a clinical tutorial, Diane Games shares the importance of acceptance in stuttering therapy, providing interesting case study examples for how acceptance is a key component of stuttering therapy. The next article, by Farzan Irani and I discuss outcome data related to an intensive stuttering therapy for adolescent and adults. The final paper by Matt Althouse and his colleagues, illustrates the process of living with and recovering from stuttering. I would like to thank all of these authors for contributing papers. Each are not only close colleagues of mine, but also good friends who have all contributed to this discussion of fluency disorders.

Each of these papers was reviewed by a team of editorial consultants, and I would like to thank each of them for their time and effort in assuring that each of these papers are ready for publication. Also, I would like to thank our editor, Laurie Sheehy, for her guidance and support throughout this process. I hope you enjoy reading this issue.

Sincerely,

Rodney Gabel, Ph.D., CCC-SLP, BR-SFD
Issue Editor

A fluency disorder is a “speech disorder” characterized by deviations in continuity, smoothness, rhythm, and/or effort with which phonologic, lexical, morphologic, and/or syntactic language units are spoken.

(American Speech-Language-Hearing Association, 1999)
School Speech-Language Pathologists’ Experiences with Stuttering: An Ohio Survey

Rodney M. Gabel

Abstract
This survey study was conducted to describe the training, experiences, and comfort level that school speech-language pathologist (SLPs) have with treating children who stutter. In addition, the willingness that SLPs reported to pursue continued educational opportunities and their perceptions of fluency specialists was also explored. To accomplish these goals, 500 surveys were mailed to SLPs working in school districts in Ohio. One-hundred and forty one usable surveys were returned. The study found that SLPs reported limited academic and clinical training in the area of stuttering and they did not feel confident or successful when treating clients who stutter. The majority of school SLPs surveyed did not have high interest in the area of stuttering and did not currently engage in continuing educational opportunities to further their knowledge regarding fluency disorders. However, the participants did express high interest in consulting with fluency specialists to improve the services that their clients who stutter are receiving. A small percentage of participants were highly interested in pursuing specialty board recognition in fluency. Suggestions and implications for training in the area of fluency and fluency disorders are discussed.

Learning Objectives
(1) Participants will identify issues related to education training of SLPs in the area of fluency disorders
(2) Participants will recognize the levels of comfort and understanding a sample of SLPs report about stuttering
(3) Participants will identify possible solutions for problems identified in the study

There is no more important issue for Speech-Language Pathologists (SLPs) than improving treatment for individuals with communication disorders. This is especially true for SLPs working with children with any communication disorders in the school setting, including children who stutter (Manning, 2001; Yaruss, 2002). When considering treatment for children who stutter, one must consider the possible barriers to effective treatment. One of these barriers may be the educational and clinical experiences that school SLPs have had with stuttering. Unfortunately, findings from studies over the past several decades continually report that clinicians working in schools report being uncomfortable and ill prepared to work with children who stutter (Brisk, Healey, & Sommers, 1997; Curlee, 1985; Kelly et. al, 1997; St. Louis & Lass, 1981; St. Louis & Durrenberger, 1993; Tellis, Bressler, & Emerick, 2008). This finding is consistent with other types of lower incidence communication disorders such as voice disorders (van Mersbergen, Ostrem, & Titze, 2001) and Traumatic Brain Injury (McCrane & Cascella, 2000). It is reasonable to believe that training programs might be responsible for SLP’s lack of preparation to work with individuals who stutter. Several research studies have explored issues that graduate programs have with training clinicians to treat people who stutter. In one study, Curlee (1985) found that most universities offered at least one class that focused on stuttering, either at the undergraduate or graduate level. This study also found that university programs provided some, albeit minimal, clinical experience with stuttering, due to a limited number of people who stutter attending their clinics. In more recent studies, Yaruss (1999) and Yaruss and Quesal (2002) conducted surveys of the current status of academic and clinical education in fluency disorders at programs accredited by the American Speech, Language, and Hearing Association. In total, these studies found that many programs did not require students to complete a graduate course devoted to stuttering. However, the most serious concern was that over half of the programs reported that clinical experience in fluency disorders was not required and it was possible for a student to graduate without any clinical experience.
with fluency disorders. Also, Kelly et al. (1997) and Tellis et al. (2008) found that clinicians in their studies reported that their coursework focused heavily on theory and less attention was given to assessment and treatment.

In the school setting, it has been reported that there are multiple demands placed on clinicians in school environment such as high caseloads (Mallard & Westbrook, 1988; Yaruss, 2002). Tellis et al. (2008) explored the experiences that clinicians had in working with people who stutter. Though clinicians had large caseloads on average, it was found that the average number of children who stutter seen on their caseload was 2 with the clinicians reporting that they had only seen an average of 12 during their entire career. Brisk et al. (1997) and Kelly et al. (1997) reported similar findings, suggesting that SLPs had the opportunity to work with very few children who stutter (CWS) on their current caseloads and throughout their careers. One can assume that it is difficult for clinicians to overcome their discomfort with treating and assessing stuttering, if they are unable to work with CWS.

One potential means of meeting the educational needs of students and practicing SLPs is continuing education workshops and seminars. Sommers and Caruso (1995) conducted a survey of in-service training for clinicians. The findings of this study suggested that during a five year time period, there were very few continuing education programs at the ASHA conference. Brisk et al. (1997) reported that their sample of SLPs reported that they did not attend conferences or continuing education in stuttering. In a more recent study, Tellis et al. (2008) explored the interest that practicing SLPs had in pursuing in-service training in stuttering, and found that a high percentage of SLPs were interested in continuing education. The participants in this study did report that they had not attended many continuing education events in stuttering and that many of the events that they did attend were not specific to assessment and treatment. The participants did not view these presentations as useful. From these results, it appears necessary to gain an understanding of how to improve opportunities for clinicians to have quality continuing education in treating and assessing stuttering.

Historically, several pioneers in the field of stuttering have suggested training specialists to work specifically with people who stutter (Curlee, 1985; Ainsworth, 1974; Leith, 1971; Van Riper, 1977). It took many years for this option to formally develop. Over the past decade to 15 years, there has been an establishment development of specialty recognition in fluency and fluency disorders (Manning, 2001). There are approximately 300 fluency specialists, with fewer than 10 in the state of Ohio. To become a specialist, an individual has to work under the direction of a Board Recognized Specialist in Fluency Disorders to develop a program of study that will lead to fluency specialization (Manning, 2001). This training requires both 100 guided clinical hours in stuttering and 100 clock hours of educational activities related to fluency and fluency disorders. All of these activities must be completed once the individual has completed the Master’s degree with a minimum of two years of experience post clinical fellowship year. Though this is a valuable program, it is unclear if school based SLPs would be interested or able to meet these types of requirements.

Due to the ever broadening scope of practice in the field of speech-language pathology and the resulting changes in ASHA’s certification standards, communication disorders students are not gaining the exposure to stuttering they need to be competent in the area of fluency disorders (Yaruss 1999; Yaruss & Quesal, 2002). Unfortunately, these shortcomings appear to be consistent and longstanding (Kelly, et.al, 1997; Yaruss, 1999; Yaruss & Quesal 2002; Tellis, et. al, 2008). The expansion of the scope of practice for SLPs, coupled with training programs that are not structured to accommodate these changes, have contributed to insufficient training of SLPs who treat children who stutter. Unfortunately, most research suggests that there are barriers to SLPs working effectively with people who stutter in the schools (Brisk, et. al, 1997; Kelly, et.al, 1997; Tellis, et. al, 2008). Incorporating specialists in the process of service delivery and training might be helpful, but little is known about how these individuals might be used in the public school setting. Finally, little is known about how widespread these issues are in specific states, for example Ohio. Additional research is needed to explore the training, experiences, and comfort school SLPs have relative to treating children who stutter in each state, since there will be variation in training programs, school regulations on caseloads, and quality of state conferences. Therefore, the purpose of this paper is to explore these issues in a sample of SLPs working in schools in Ohio.
The following research questions will guide this study:

1) What are school SLPs’ academic and clinical experiences with stuttering treatment?
2) What are school SLPs’ comfort levels with stuttering treatment?
3) What are the interests, perceptions, and preferences of school SLPs in continuing education in the area of fluency?
4) Are school SLPs aware of board recognized specialization in the area of fluency; what is their interest in becoming a specialist; and what are their perceptions of employing the assistance of a fluency specialist?

Methods

Development of the Survey

A questionnaire was developed for use in this study (see Appendix A). Items were developed following an extensive review of the literature pertaining to this area of research (Kelly et.al, 1997; Mallard et.al, 1988; Sommers and Caruso, 1995; St. Louis and Lass, 1981; St. Louis and Durrenberger, 1993; Yaruss, 1997; Yaruss & Quesal, 2002). All items were developed to answer the purpose and specific research questions of the study. Survey items consisted of open-ended questions, 5 point rating scales, and forced choice selections. After an initial group of items was developed, an initial pilot study was completed to measure the clarity and perceived importance of items on the scale. Ten SLPs with experience working in the schools and three experts in training clinicians completed the survey and provided information about the clarity, readability, importance of content, and ease of completion. Changes were made to the instrument based on the information provided by these SLPs.

The final version of the scale included 44-items (see Appendix A). The questionnaire explored a variety of topics and was divided into sections. The first section, Demographic Information, was designed to gather information about the participants’ age, gender, and ethnicity. Additionally, the participants shared information about their present position, degrees earned, years of employment as an SLP in the school setting, and licensure held. The Educational Background section of the survey was designed to explore the clinical and academic training that the participants have received in the area of stuttering. The Continuing Education Section of the survey was created to explore the continuing educational opportunities is stuttering that school SLPs had taken advantage of or would be interested in attending. The Experience and Abilities with Stuttering directed the respondents to share experiences they had treating stuttering, as well as their perceived abilities and successes in treating people who stutter. The final section, titled Specialization Issues, explored the awareness and interest that participants had in becoming a fluency specialist or utilizing a fluency specialist in their treatment of PWS.

Procedures

Five-hundred randomly selected SLPs, who were members of the Ohio Speech, Language, and Hearing Association (OSHLA), were mailed a survey packet that included the questionnaire and a cover letter that instructed the participants to complete the survey within two weeks and return it in a postage paid envelope. The cover letter also gave a brief overview of the study, verified that the information provided by the potential participants would be kept anonymous, and explained that participation was voluntary.

To ensure a higher return rate, a reminder letter was sent to the participants two weeks following the initial mailing. This letter thanked them for their participation and reminded them to complete and return the survey if they had not done so. One-hundred and sixty one surveys of the original 500 were returned (32.2%). Twenty of these surveys were not completed sufficiently to be analyzed (these surveys had more than a page that was not completed). Therefore, 141 usable surveys (28.2% return rate) were analyzed in this study.

Participants

Demographic information gathered about the participants is summarized in Table 1. The data regarding age, gender, years of experience, and ethnic characteristics of the sample population appear representative of the general population of SLPs nationwide. A high percentage of the population appeared to be working as SLPs in a combined school setting with a variety of grades and ages of students being served. Smaller percentages of respondents were working exclusively in an elementary school, a preschool, an MRDD facility, a junior high, or a high school. Ninety-seven percent of the participants had earned a masters degree, 1% of the participants had earned a bachelor’s degree, and 1% had earned a doctoral degree. A large percentage of the population...
held ASHA certification, state licensure, and school licensure.

Table 1
Pertinent Demographic Information for the Participants in this Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean / Standard Deviation</th>
<th>Range</th>
<th># of Participants</th>
<th>% of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td>41/10.4</td>
<td>25-69</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gender - Female</td>
<td>-</td>
<td>-</td>
<td>141</td>
<td>100%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>-</td>
<td>-</td>
<td>128</td>
<td>91%</td>
</tr>
<tr>
<td>African-American</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Not revealed</td>
<td>-</td>
<td>-</td>
<td>11</td>
<td>8%</td>
</tr>
<tr>
<td>Present Position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLP</td>
<td>-</td>
<td>-</td>
<td>135</td>
<td>96%</td>
</tr>
<tr>
<td>SLP Supervisor</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Place of Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined schools</td>
<td>-</td>
<td>-</td>
<td>101</td>
<td>72%</td>
</tr>
<tr>
<td>Elementary school</td>
<td>-</td>
<td>-</td>
<td>18</td>
<td>13%</td>
</tr>
<tr>
<td>Preschool</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>11%</td>
</tr>
<tr>
<td>MR/DD facility</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>High school</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Junior high</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Years as an SLP</td>
<td>15.2/9.3</td>
<td>1.5-35</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Years in present position</td>
<td>8.2/7.4</td>
<td>0-31</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters degree</td>
<td>-</td>
<td>-</td>
<td>137</td>
<td>97%</td>
</tr>
<tr>
<td>Bachelors degree</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1.5%</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1.5%</td>
</tr>
<tr>
<td>Certification Held</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Licensure</td>
<td>-</td>
<td>-</td>
<td>140</td>
<td>99%</td>
</tr>
<tr>
<td>ASHA CCCs</td>
<td>-</td>
<td>-</td>
<td>136</td>
<td>96%</td>
</tr>
<tr>
<td>School Certification</td>
<td>-</td>
<td>-</td>
<td>135</td>
<td>96%</td>
</tr>
<tr>
<td>Temporary School License</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2%</td>
</tr>
</tbody>
</table>

Data Analysis
A descriptive design was utilized in this study to examine the participants’ responses to the survey questions. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to analyze and to indicate the participants’ beliefs, perceptions, and general agreement or disagreement with a statement. The descriptive statistics were analyzed for possible consistencies and trends in the participants’ reports.

Results
Educational Background in Stuttering
The second section of the survey asked the participants to provide information about their educational background in stuttering (See Appendix A). The findings for this section related to coursework are summarized in Table 2. Item 1 in this section asked participants to report the number of stuttering courses taken. First, participants reported the number of classes devoted solely to stuttering at the undergraduate level. Forty-eight percent of 141 participants reported having one class solely devoted to stuttering, 47% reported not having a class devoted to stuttering, and 5% reported having 2 courses. Participants were then asked to report the number of courses partially devoted to stuttering at the undergraduate level. Forty-four percent of those surveyed reported taking one course partially devoted to stuttering, 35% reported having no classes, and 21% had two or more courses.

Table 2
Information Regarding Educational Background in Stuttering

<table>
<thead>
<tr>
<th>Academic Level</th>
<th>Number of Participants</th>
<th>Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Devoted to stuttering only</td>
<td>141</td>
<td>100%</td>
</tr>
<tr>
<td>No courses</td>
<td>67</td>
<td>47.5%</td>
</tr>
<tr>
<td>One course</td>
<td>67</td>
<td>47.5%</td>
</tr>
<tr>
<td>Two or more courses</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>Partially devoted to stuttering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No courses</td>
<td>141</td>
<td>100%</td>
</tr>
<tr>
<td>One course</td>
<td>49</td>
<td>35%</td>
</tr>
<tr>
<td>Two or more courses</td>
<td>62</td>
<td>44%</td>
</tr>
<tr>
<td>Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Devoted to stuttering only</td>
<td>140</td>
<td>100%</td>
</tr>
<tr>
<td>No courses</td>
<td>14</td>
<td>10%</td>
</tr>
<tr>
<td>One course</td>
<td>110</td>
<td>79%</td>
</tr>
<tr>
<td>Two or more courses</td>
<td>16</td>
<td>11%</td>
</tr>
<tr>
<td>Partially devoted to stuttering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No courses</td>
<td>140</td>
<td>100%</td>
</tr>
<tr>
<td>One course</td>
<td>66</td>
<td>47%</td>
</tr>
<tr>
<td>Two courses</td>
<td>49</td>
<td>35%</td>
</tr>
<tr>
<td>Two or more courses</td>
<td>25</td>
<td>18%</td>
</tr>
</tbody>
</table>

Item 2 in this section of the survey asked participants to report information regarding the number of stuttering courses taken at the graduate level. Seventy-nine percent reported having one class devoted solely to stuttering, 11% reported having two or more courses devoted solely to stuttering, and 10% reported having no classes. Forty-seven percent of the 140 participants
who responded to this question indicated having no classes partially devoted to stuttering at the graduate level, 35% had one course, 18% had two or more courses.

Item 3 asked participants to identify the focus of their undergraduate and graduate stuttering courses. One hundred and thirty-five participants reported that an average of 42% of the stuttering courses focused on theory. One hundred and thirty-four participants reported that an average of 29% of the courses focused on therapy and an average of 27% focused on diagnosis.

Item 4 asked the participants to estimate the number of clinical training hours received in the diagnosis and treatment of people who stutter during their undergraduate, graduate, and Clinical Fellowship Year (CFY) training. Table 3 summarizes their information. At the undergraduate level, 55% of 120 participants reported receiving 0 hours of experience in diagnosis of stuttering, 23% received 1-5 hours of stuttering diagnosis, 4% received 6-10 hours, 3% received 11-25 hours. Fifty five percent of the 120 participants reported having no hours in stuttering treatment, 13% had 6-10 hours, 8% had 1-5 hours, 7% had 11-25 hours, and less than 1% had 30 hours.

One hundred and eleven participants reported their clinical experiences at the graduate level. Thirty-three percent of the respondents reported having 1-5 hours of stuttering diagnostic hours, 21% had 0 hours, 21% had 6-10 hours, 8% had 11-25 hours, and 2% had more than 25 hours of clinical experience at the graduate level. For treatment at the graduate level, of the 110 participants that completed this item, 29% reported having 16-25 treatment hours in stuttering, 13% reported 0 hours, 12% reported 6-10 hours, 12% reported 11-15 hours, 11% reported over 25 hours, and 5% reported 1-5 hours.

During the clinical fellowship year (CFY), of 116 participants who responded to this item, 45% reported having 0 hours in stuttering diagnosis during their clinical fellowship year, 28% reported 1-5 hours, 6% reported 6-10 hours, and 4% reported 11-20 hours. For treatment during the CFY, of 115 participants 42% reported 0 hours in the treatment of stuttering, 12% reported 6-10 hours, 9% reported over 30 hours, 7% reported 1-5 hours, 4% reported 11-20 hours, and 3% reported 21-30 hours.

Item 5 asked the participants to rate their level of academic interest in stuttering and fluency disorders on a scale of 1 (not interested) to 5 (very interested). The mean rating for this item was 3.2. Scores of 4 and 5 were considered to show a high level of interest. Scores of 1, 2, and 3 were considered to show a low level of interest. Five percent of the participants reported a 5 for this item, 30% reported a 4, 67% reported a 3, 20% reported a 2, 6% reported a 1, and 1% did not respond.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Information regarding clinical experience in stuttering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experience Level</strong></td>
<td><strong>Number of Respondents</strong></td>
</tr>
<tr>
<td><strong>UNDERGRADUATE</strong></td>
<td></td>
</tr>
<tr>
<td>Diagnostic</td>
<td>120</td>
</tr>
<tr>
<td>0 hours</td>
<td>77</td>
</tr>
<tr>
<td>1-5 hours</td>
<td>33</td>
</tr>
<tr>
<td>6-10 hours</td>
<td>6</td>
</tr>
<tr>
<td>11-25 hours</td>
<td>4</td>
</tr>
<tr>
<td>Treatment</td>
<td>120</td>
</tr>
<tr>
<td>0 hours</td>
<td>78</td>
</tr>
<tr>
<td>1-5 hours</td>
<td>12</td>
</tr>
<tr>
<td>6-10 hours</td>
<td>19</td>
</tr>
<tr>
<td>11-25 hours</td>
<td>11</td>
</tr>
<tr>
<td>more than 25 hours</td>
<td>1</td>
</tr>
<tr>
<td><strong>GRADUATE</strong></td>
<td></td>
</tr>
<tr>
<td>Diagnostic</td>
<td>111</td>
</tr>
<tr>
<td>0 hours</td>
<td>29</td>
</tr>
<tr>
<td>1-5 hours</td>
<td>47</td>
</tr>
<tr>
<td>6-10 hours</td>
<td>21</td>
</tr>
<tr>
<td>11-25 hours</td>
<td>11</td>
</tr>
<tr>
<td>more than 25 hours</td>
<td>3</td>
</tr>
<tr>
<td>Treatment</td>
<td>0</td>
</tr>
<tr>
<td><strong>CLINICAL FELLOWSHIP YEAR</strong></td>
<td></td>
</tr>
<tr>
<td>Diagnostic</td>
<td>116</td>
</tr>
<tr>
<td>0 hours</td>
<td>63</td>
</tr>
<tr>
<td>1-5 hours</td>
<td>39</td>
</tr>
<tr>
<td>6-10 hours</td>
<td>9</td>
</tr>
<tr>
<td>11-20 hours</td>
<td>5</td>
</tr>
<tr>
<td>Treatment</td>
<td>115</td>
</tr>
<tr>
<td>0 hours</td>
<td>59</td>
</tr>
<tr>
<td>1-5 hours</td>
<td>10</td>
</tr>
<tr>
<td>6-10 hours</td>
<td>17</td>
</tr>
<tr>
<td>11-20 hours</td>
<td>12</td>
</tr>
<tr>
<td>21-30 hours</td>
<td>4</td>
</tr>
<tr>
<td>more than 30 hours</td>
<td>13</td>
</tr>
</tbody>
</table>
Continuing education
The next section of the questionnaire asked participants to report information regarding continued educational experiences in stuttering. Item 1 asked the participants to report their participation in continuing education activities related to stuttering. Of the 141 participants who responded, 79% reported utilizing consultation with an SLP, 78% reported previous use of journal articles, 69% reported engagement in stuttering workshops, 55% reported using texts regarding stuttering, 48% attended conferences, 22% reported consulting with a specialist in stuttering, 16% reported participating in service training, and 4% reported experiences with a fluency boot camp.

Item 2 asked participants to report which continuing education activities they would choose to attend in the future. Of 141 participants, 93% reported interest in attending a workshop during the school year, 55% reported interest in journal articles regarding stuttering, 48% reported interest in consulting with a specialist, 44% reported interest in summer workshops, 44% reported interest in attending conferences, 21% reported interest in service training, 22% reported interest in texts regarding stuttering, and 6% reported interest in a fluency boot camp.

Item 3 asked participants to report how often they engage in continuing education activities related specifically to stuttering. Of 139 participants, 66% reported attending stuttering CEUs less than once per year, 21% reported attending one per year, 2% reported attending 2 per year, 1% three per year, 3% four per year, and 6% reported attending no stuttering CEUs.

Item 4 asked participants to rate the quality of the continuing education activities focusing on stuttering that they had attended on a scale of 1 (very poor) to 5 (very good). The mean rating of quality was 3.2 (sd=.88). Ratings of 4 and 5 were considered to portray a good quality of continuing education activities, while ratings of 1, 2, and 3 were considered to portray poor quality. Of 129 respondents, 6% reported a 5, 33% reported a 4, 36% reported a 3, 16% reported a 2, and 1% reported a 1. Item 5 asked participants to rate their level of interest in continuing education in stuttering on a scale of 1 (not interested) to 5 (very interested). The mean response for the level of interest was 3.1 (sd=1). Ratings of 4 and 5 were considered to show interest in continuing education, while scores of 1, 2, and 3 were considered to show low interest. Of 141 participants, 8% reported a 5, 33% reported a 4, 36% reported a 3, 18% reported a 2, and 5% reported a 1.

Item 6 asked participants to report if they felt there were sufficient opportunities for continuing education in stuttering available to them. Of 138 participants that responded, 67% felt that there were not sufficient opportunities for continuing education in stuttering, while 33% felt that there were. Item 7 asked participants to report if they felt they had a sufficient amount of education in stuttering. Of 140 participants, 74% felt that they have not had sufficient education in stuttering, while 26% thought they had.

Experience/abilities with stuttering
For the next part of the questionnaire, participants reported information regarding experiences and abilities with stuttering. Item 1 asked participants to report the number of clients on their present caseloads. The mean number of clients was 50 (sd=18.5), with a range from 2-91 clients. Item 2 asked participants to report the number of clients who stutter on their caseloads. Of 138 participants, the mean number of clients who stutter was 2 (sd=1.6), with a range of 0-9 clients. Thirty-two percent of the participants reported having 2 clients who stutter, 20% reported having 1 client, 20% reported having no clients, 15% reported having 3 clients, 7% reported 5 clients, 3% reported 4 clients, and 3% reported having more than 5 clients.

For Item 3, participants reported the percentage of their caseloads that had the following disorders: articulation, language, fluency, and voice. One hundred thirty-four participants responded to this item. The mean percentage of clients with language disorders was 58% (sd=24.1), with a range of 0-100%. The mean percentage of clients with articulation disorders was 34% (sd=20.9), with a range of 0-100%. The mean percentage of fluency clients was 3.7% (sd=5) with a range of 0-40. The mean percentage of voice clients was .4% (sd=1.2) with a range of 0-8 clients.

Item 4 asked participants to indicate how many children who stutter enrolled in their schools who were not presently being seen. Of 136 respondents, the mean was .6% (sd=1.3), with a range of 0-9 children. Seventytwo percent reported that there were no children who stutter in their school that were not receiving services, 10% reported one child, 7% reported two children, 3%
reported 3 children, 3% reported 4 children, 1% reported 5 children, and 1% reported 9 children were not being seen.

Item 5 required participants to indicate how they achieved their present level of competence with clients who stutter. Of 141 participants 82% achieved competence through formal education, 81% achieved competence through experience with clients who stutter, 72% achieved competence through collaboration with other SLPs, and 70% achieved competence with continued education.

Item 6 asked participants to respond to the item, “I think that I have had a sufficient amount of experience treating people who stutter,” on a scale of 1 (strongly disagree) to 5 (strongly agree). This data is presented in Table 4. The mean score for this item was 2.5 (sd=1). Scores of 4 and 5 were considered to represent sufficient experience in treating people who stutter, scores of 1-3 were considered to represent insufficient experience. One percent of 141 participants who responded reported a 5, 17% reported a 4, 30% reported a 3, 35% reported a 2, 17% reported a 1. Item 7 required the participants to rate the item “I have been successful in treating people who stutter,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 3 (sd=.92). Ratings of 4 and 5 were considered to represent success in treating people who stutter, ratings of 1-3 were considered to represent lack of success. Four percent of 141 participants reported a 5, 26% reported a 4, 43% reported a 3, 23% reported a 2, and 5% reported a 1.

Item 8 asked participants to identify which age group of people who stutter they felt most successful in treating. Thirteen percent of 140 participants reported that they felt most successful treating preschoolers, 60% indicated school-aged children, 13% indicated adolescents, 12% indicated they did not feel successful treating any age group, and 1% indicated adults. Item 9 asked participants to identify which age group of people who stutter they felt most confident treating. Sixty-two percent of 141 participants reported feeling most confident treating school age children who stutter, 14% indicated they felt most confident treating preschool children, 12% indicated adolescents, 10% indicated that they did not feel confident treating any group, and 2% indicated adults.

### Table 4

<table>
<thead>
<tr>
<th>Item</th>
<th>Raw Scores</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number 6- I have a sufficient amount of experience treating people who stutter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total responses</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>Mean response</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>1 (strongly disagree)</td>
<td>24</td>
<td>17%</td>
</tr>
<tr>
<td>2</td>
<td>48</td>
<td>35%</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
<td>30%</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>17%</td>
</tr>
<tr>
<td>5 (strongly agree)</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Number 7- I have been successful in treating people who stutter.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total responses</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>Mean response</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>1 (strongly disagree)</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>2</td>
<td>32</td>
<td>23%</td>
</tr>
<tr>
<td>3</td>
<td>59</td>
<td>43%</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
<td>26%</td>
</tr>
<tr>
<td>5 (strongly agree)</td>
<td>6</td>
<td>4%</td>
</tr>
</tbody>
</table>

Item 10 required participants to rate how factors contribute to their level of comfort in treating people who stutter on a scale of 1 (uncomfortable) to 5 (comfortable). One hundred and thirty seven participants responded to this item. A mean rating of 3.3 (sd=1.1) was reported for treatment success, interest in stuttering received a mean rating of 3.2 (sd=1), knowledge of stuttering received a mean score of 3.1 (sd=1), experience with stuttering treatment received a mean score of 3 (sd=1.1), exposure to stuttering received a mean score of 2.9 (sd=1), and time received a mean score of 2.9 (sd=1).

Item 11 asked participants to identify some of the factors that hinder their ability to provide treatment to people who stutter. A list of factors was provided and participants checked any factors that they felt hindered their ability. Of 141 participants, 47% felt that lack of knowledge hindered their ability to perform treatment to children who stutter. Of 140 participants, 65% felt that lack of experience with fluency disorders hindered ability to perform treatment, 40% felt that lack of time hindered their ability to perform treatment, 27% felt that lack of exposure hindered ability to perform treatment, 24% felt that lack of success hindered ability to perform treatment, and 14% felt lack of interest hindered their ability to provide treatment to children who stutter. Item 12 asked participants to rate their preferences to treat certain disorders on a scale of 1
(least preferred to treat) to 5 (most preferred to treat). One hundred and thirty-nine participants responded to this item. Language received a mean rating of 4.6 (sd=.61), articulation was given a mean rating of mean rating of 4.3 (sd=.9), reading/writing received a mean of 3.4 (sd=1.2), autism a 3.3 (sd=1.1), developmental apraxia a 3.2 (sd=1.1), hearing disorders a 2.8 (sd=1.1), AAC a 2.7 (sd=1.3), fluency a 2.6 (sd=1.1), and voice a 2.1 (sd=1).

Item 13 required participants to indicate how often they see their clients who stutter. Table 5 summarizes these findings. Of 124 participants, 45% see stuttering clients two times per week, 40% see stuttering clients one time per week, 1% three times per week, 1% five times per week, and 1% one time per month. Item 14 asked participants to report the average duration of treatment sessions with clients who stutter. Of the 126 participants who responded, 68% reported 21-30 minutes, 21% reported 11-20 minutes, 6% reported 31-40 minutes, 5% reported 41-50 minutes, and 2% reported over 60 minutes.

### Table 5

<table>
<thead>
<tr>
<th>Item</th>
<th>Raw Scores</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number 13- How often do you see your clients who stutter (choose the item that most represents your service delivery)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total responses</td>
<td>124</td>
<td>-</td>
</tr>
<tr>
<td>1 x per week</td>
<td>56</td>
<td>45%</td>
</tr>
<tr>
<td>2 x per week</td>
<td>64</td>
<td>52%</td>
</tr>
<tr>
<td>3 x per week</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>5 x per week</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>1 x per month</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Number 14- What is the average duration of your treatment sessions with clients who stutter (choose the item that most represents your service delivery)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total responses</td>
<td>126</td>
<td>-</td>
</tr>
<tr>
<td>11-20 minutes</td>
<td>26</td>
<td>21%</td>
</tr>
<tr>
<td>21-30 minutes</td>
<td>85</td>
<td>68%</td>
</tr>
<tr>
<td>31-40 minutes</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>41-50 minutes</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>over 60 minutes</td>
<td>2</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Specialization Issues

The last section of the survey required participants to report their perceptions of, experiences with, and knowledge of specialization issues in stuttering. Item 1 asked participants to indicate if they considered themselves to be a specialist in stuttering. Of 140 participants, 4% considered themselves a specialist. Item 2 asked participants if they were a board recognized specialist in fluency and fluency disorders. Of the 140 participants who responded, none reported being Specialty Board recognized.

Item 3 asked participants to indicate if they were aware of the specialty recognition program in fluency disorders offered through ASHA and the Specialty Board in Fluency Disorders. Of 140 participants, 33% were aware of the specialty recognition program. Item 4 required the participant to rate the statement, “If it were possible to obtain this recognition, I would be interested in becoming a recognized fluency specialist through the present program,” on a scale of 1 (strongly disagree) to 5 (strongly agree). One hundred and forty participants responded to this item. The mean score for this item was 2.3 (sd=1.1). Four percent reported a 5, 15% reported a 4, 21% reported a 3, 30% reported a 2, and 31% reported a 1.

Item 5 asked the participants to rate the statement, “If classes/clinical experience were available through universities during a specialty program offered during the school year (August-June), I would be interested in attending in order to work toward fluency specialty recognition,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 2.3 (sd=1.1). Of 140 participants, 4% reported 5, 11% reported a 4, 26% reported a 3, 32% reported a 2, and 29% reported a 1.

Item 6 asked the participants to rate the following statement, “If classes/clinical experience were available through universities during a specialty program offered in the summer, I would be interested in attending in order to work on fluency specialty recognition,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 2.5 (sd=1.2). Of 140 participants, 4% reported 5, 16% reported 4, 27% reported 3, 26% reported 2, and 29% reported 1.

Item 7 asked participants to indicate if they knew of any fluency specialists in their area. Of 140 participants, 23% knew of a fluency specialist in their area. The mean number of known fluency specialists in the area was .3 (sd=.68), with a range of 0-3 specialists. Eighty percent reported no specialists in their area, 11% reported 1 specialist, 8% reported 2, and 1% reported 3.

Item 8 asked participants to identify if they had ever consulted a fluency specialist. Twenty-two percent of 140 participants indicated that they had consulted with...
a specialist. Seventy-seven percent of participants indicated they had never consulted with a specialist. Of the participants, 19% consulted with a fluency specialist less than once per year, 2% consult 2-3 times per year, 1% consult 4-5 times per year, and 1% consulted more than 5 times per year.

Item 9 asked participants to rate the following statement, “If there was a fluency specialist in my area, I would consult with this specialist,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 3.9 (sd=1). Of 140 participants, 32% reported a 5, 36% reported a 4, 22% reported a 3, 7% reported a 2, and 2% reported a 1. Item 10 asked participants to rate the statement “If a fluency specialist made himself/herself available to me I would consult with him or her,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 4.2 (sd=.86). Of 140 participants 41% reported a 5, 37% reported 4, 17% reported 3, 4% reported 2, and no participants reported a 1. Ratings of 4 and 5 were considered to represent agreement with the statements. Ratings of 1-3 were considered to represent disagreement.

Item 11 asked participants to rate the statement, “My school district would benefit from hiring a fluency specialist,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 2.3 (sd=1.1). Of 138 participants, 4% reported 5, 9% reported 4, 28% reported 3, 30% reported 2, and 30% reported 1. Item 12 asked participants to rate the statement, “My school district would benefit from a structured consulting arrangement/relationship with a fluency specialist,” on a scale of 1 (strongly disagree) to 5 (strongly agree). The mean score for this item was 3.2 (sd=1.3). Of 139 participants 19% reported 5, 24% reported 4, 24% reported 3, 22% reported 2, 11% reported 1. Ratings of 4 and 5 were considered to represent agreement with the statements. Ratings of 1-3 were considered to represent disagreement.

**Discussion**

Overall, the results of the study revealed that academic and clinical training in stuttering is at least limited, if not inadequate, for school based SLPs who work in Ohio that participated in this study. It is also apparent that clinicians’ received little clinical experience and do not feel confident or successful when treating clients who stutter. These inadequacies are a longstanding problem, as these findings closely parallel studies that have been conducted in this area over the past two decades (Brisk & Healey, 1997; Curlee, 1985; Kelly et al., 1997; Leith, 1971; Tellis, et al., 2008; Yaruss, 1999, Yaruss & Quesal, 2002). The majority of school SLPs surveyed did not have high interest in the area of stuttering and did not currently engage in continuing educational opportunities to further their knowledge regarding fluency disorders. However, the participants did express high interest in consulting with fluency specialists to improve the services that their clients who stutter are receiving. A small percentage of participants were highly interested in pursuing specialty board recognition in fluency.

**Educational Background**

The first part of the survey explored the participants’ educational background in stuttering. Almost half (47.5%) of the participants reported not having a class solely devoted to stuttering at the undergraduate level and 10% reported not having a class solely devoted to stuttering at the graduate level. This indicates that it is possible for students to obtain a Master’s degree without taking a course completely dedicated to fluency disorders. The survey results indicated that theory was emphasized most often in these classes, with less time being spent on treatment and diagnosis. This data is similar to the data obtained in previous studies that explored academic education in fluency disorders (Curlee, 1985, Kelly et al., 1997, Tellis, et al., 2008; Yaruss, 1999, Yaruss & Quesal, 2002). As with those studies, the present findings indicate that little has changed over the past two decades regarding academic education in the area of stuttering.

The survey results indicate that over 60% of this sample reported that they were able to earn a Master’s degree without completing clinical experiences in diagnosis or treatment of fluency disorders. It is also likely that a clinician may not earn experience in treatment or diagnosis of fluency disorders during his or her CFY, as evidenced by almost half of the participants reporting that they did not work with any clients who stutter during their CFY. These results indicate that SLPs are gaining little exposure to the diagnosis and treatment of fluency disorders at all levels of their training. This data is comparable to several studies, spanning two decades, which looked at clinical training in the area of fluency disorders (Curlee, 1985, Kelly et al., 1997, Yaruss, 1999, Yaruss & Quesal, 2002). As with the past findings, this
research supports the notion that communication disorders students are often ill prepared to work with clients who stutter.

Participants did not indicate a strong academic interest in stuttering and fluency disorders, as only 5% reported that they were highly interested in fluency disorders. When asked to rate their academic interest in stuttering, the majority of the respondents reported a 3 on a scale of 1 (not interested in) to 5 (highly interested). This indicates that most school SLPs in this sample did not have a high interest in fluency disorders. This supports past research that has found that students in communication disorders (St. Louis & Lass, 1981) and SLPs (St. Louis & Durrenberger, 1993) do not report a high interest in stuttering.

Continuing Education
The second section of the survey explored the participants’ experiences and interest in continued education activities in the area of stuttering. The survey results indicated that more than half of participants attended continuing education opportunities in the area of stuttering less than once per year. The continuing education activities that the participants would be most likely to choose to engage in were workshops during the school year (93%), journal articles (55%), consultation with a specialist (48%), attending conferences (44%), and summer workshops (44%). Participants were not as interested in texts regarding stuttering (22%), in-service training (21%), and fluency boot camp (6%). The majority of the participants indicated that the quality of the continued education activities were average to very good. These results are different from those found by Sommers and Caruso (1995), who found that most SLPs reported that continuing education courses in stuttering were poor, but are similar, to what were found by Tellis et. al (2008). More research is needed to explore the availability and quality of continuing education training in stuttering.

Few participants (8%) reported being very interested in continuing education in stuttering, while most (74%) of participants felt that they had not had sufficient education in the area of stuttering. The majority of participants (67%) did not feel that there were sufficient opportunities for continued education in stuttering. These findings are similar to studies completed by Sommers and Caruso (1995) and Tellis et al., (2008) that suggested that increased fluency in-service opportunities were needed and that these opportunities need to be relevant and applicable. Future research should be conducted that explores why SLPs are not interested in continuing education in stuttering, since continuing education is clearly necessary to assist SLPs in gaining training in the area of stuttering. Data from this type of research could help in identifying factors that contribute to helping individuals access and become interested in continuing education in the area of stuttering.

Experience/Abilities with Stuttering
The average number of clients on the participants’ caseload was 50. The mean number of clients who stutter was two. The majority of participants’ caseloads were comprised of clients with language disorders (58%) and articulation disorders (34%), while clients who stutter (3.7%) and clients with voice disorders (0.4%) were the minority. Kelly et al. (1997) also found an average of 4% of clients who stutter on school SLPs caseloads. Twenty percent of the participants reported having no clients who stutter. Twenty-eight percent of participants indicated that there were children who stutter in their school who were not receiving services. This indicates that SLPs working in Ohio schools are not widely exposed to children who stutter, due to the relatively few clients who stutter on their caseloads. There are also a number of SLPs who know of children who stutter in their schools who were not receiving services, although this could be for various reasons not specified in the survey. It might be that these children have refused treatment. Also, it could be that these children have been successful in therapy and are coping successfully with their stuttering. Finally, the SLP may be avoiding treating these children because of their discomfort with stuttering. Future research should explore if there are a significant amount of children who stutter not receiving therapy in the schools and why these children are not receiving therapy in the schools.

The majority of participants reported achieving competence in the area of stuttering through formal education (82%), experience with clients who stutter (81%), collaboration with other SLPs (72%), and continuing education (70%). However, the majority of participants indicated that they did not think they had sufficient experience in treating people who stutter and they have not been successful in treating people who stutter. These feelings of inadequacy in the successful treatment of children who stutter parallel earlier
studies in this area (Kelly et al., 1997; St. Louis & Lass, 1981; St. Louis & Durrenberger, 1993; Tellis, et al., 2008). This indicates that for more than 20 years, the majority of SLPs have not thought they were successful in treating clients who stutter, which has most likely led to clients who stutter receiving inadequate treatment.

The majority of participants indicated that they felt most successful and most confident when treating school-aged children, as opposed to other age groups. However, 12% of the SLPs indicated they did not feel successful treating any age group and 10% did not feel confident treating any age group. This indicates that participants felt most successful and confident when treating the age group in which they had experience treating. The data obtained through the survey indicated that the SLPs most preferred to treat disorders were language and articulation, while fluency and voice were the least preferred to treat. These results are similar to a study completed by St. Louis and Durrenberger (1993). The preference of disorders could be related to school SLPs caseload composition. The majority of school SLPs’ caseloads were made up of children with articulation and language disorders, which were the two most preferred disorders to treat, while children with fluency and voice disorders were a very small percentage of the caseload and were the two disorders least preferred to treat.

The participants reported that the major factors that hindered their ability to provide treatment were lack of experience, lack of knowledge, and lack of time. Fewer participants indicated that lack of exposure, lack of success, and lack of interest were factors that hindered their ability to provide treatment. School SLPs generally have a low number of children who stutter on their caseloads, which contributes to their lack of experience with stuttering. In addition, this study found that these SLPs reported limited experiences at the undergraduate and graduate level. It appears as if SLPs are not getting the opportunity to treat children who stutter.

The majority of participants see clients who stutter 1-2 times per week. Only 2% saw their clients who stutter 3-5 times per week. The majority of the participants reported conducting 21-30 minute sessions with their clients, while a few (7%) indicated conducting sessions that ranged from 41 to over 60 minutes. This finding indicates that generally clients who stutter are seen 1-2 times per week for a 21-30 minute sessions. Several authors have suggested that this model of treatment is not ideal for treating stuttering (Mallard & Westbrook, 1988; Manning, 2001; Yaruss, 2002). Future research should explore which treatment models, including alternative methods such as intensive programs, are most appropriate for treating children who stutter.

Specialization Issues
The last section of the questionnaire explored specialization issues in fluency disorders. Very few participants (4%) considered themselves specialists in stuttering and none were board-recognized specialists in fluency and fluency disorders. Only a third of the participants were aware of the specialty recognition program in fluency disorders offered through ASHA and the Specialty Board in Fluency Disorders. The majority of the participants indicated that they would not be interested in becoming a recognized fluency specialist. A small percentage of participants (4%) indicated that they were very interested in becoming a board recognized fluency specialist and 15% of participants indicated that they were somewhat interested.

The majority of participants were not interested in working toward fluency specialty recognition either during the school year or during the summer. However 4% of participants were very interested in doing so during the school year or in the summer, 11% were somewhat interested in doing so during the school year and 16% were somewhat interested in doing so during the summer. This indicates that there is some interest by the participants in working toward gaining specialty recognition in fluency and fluency disorders through a program offered during the school year or summer.

The majority of participants reported they did not know of a fluency specialist in their area and that they had never consulted with a specialist. Nineteen percent of the participants reported consulting with a specialist less than one time per year, 2% consulted 2-3 times per year, 1% consulted 4-5 times per year, and 1% consulted more than 5 times per year. There are a few SLPs who have access to a specialist and have engaged in consultation with him or her. However, it is also clear that they did not consult with the specialist frequently.

Many of the participants reported that if there was a fluency specialist in their area, they would consult with him or her. An even greater majority (78%) indicated that if a specialist made himself/herself available to
them, they would consult with him or her. This indicates that school SLPs are very interested in consulting with fluency specialists and would be even more likely to consult with him or her if the specialist was interested in collaborating. Therefore, it appears that it is important for those who have achieved specialty recognition to “reach out” to SLPs in the community to form strong collaborative and consultative relationships. It seems clear that the field would benefit from the development and exploration of programs that establish these types of consultative relationships. Few participants indicated that they thought their school district would benefit from hiring a fluency specialist, while more participants thought their school district would benefit from a structured consulting arrangement/relationship with a fluency specialist. This indicates that participants do not feel that it would be necessary for their school district to hire a fluency specialist, possibly due to the small number of fluency clients per school district. However, SLPs report more interest in the establishment of a structured relationship between their school district and a fluency specialist.

Summary and Analysis
In summary, the findings of this study support the need for additional coursework, exposure, and experiences to help prepare students in communication disorders to work with clients who stutter. Unfortunately, the new ASHA standards do not assure that students will be adequately prepared to work with fluency clients. These standards have actually reduced the requirements related to fluency. Therefore, students will continue to be able to earn a Master’s degree in speech-language pathology without gaining academic and clinical experience in the area of fluency disorders. However, this is not a problem that solely belongs to the area of fluency disorders. Because of the broad range of SLPs’ scope of practice, students may also not receive the necessary training in other areas of speech-language pathology, such as voice (van Mersbergen, etc., 2001), dysphagia (Modi & Ross, 2000), and TBI (McGrane & Cascella, 2000).

Therefore, it is necessary to find other means to educate students and SLPs in the area of stuttering, as well as provide them with exposure to and experience with clients who stutter. One way to do this may be through the use of intensive clinical programs, like those in Ohio such as the Fluency Friday Plus Program (Games & Gabel, 2008) or the Intensive Stuttering Clinic for Adolescents and Adults (Gabel & Irani, 2012). Both of these programs do provide training for students, and quality treatment for PWS.

Another way to improve training of SLPs to work with children who stutter is to introduce students to fluency disorders at the undergraduate level. This might allow for more clinically applicable courses at the graduate level, if this undergraduate course focused on theories of fluency disorders. In addition, this undergraduate course may focus on another area in which clinicians do not receive adequate training, such as voice disorders. Educational programs may also improve training in the area of stuttering by increasing the exposure students have to individuals who stutter. This could be done by providing students opportunities to observe fluency therapy or involving them in stuttering support groups, such as the National Stuttering Association. This exposure might help them to gain a better understanding of people who stutter, gain insights to the nature of stuttering, and improve attitudes towards stuttering therapy. Experiences such as these may also help students become interested in fluency disorders, which may lead a student to pursue more opportunities and strive to become a skilled clinician in the area of fluency.

Increasing continuing education opportunities appears necessary. The results of this study showed that this group of school SLPs did not feel that there are enough opportunities in continuing education in the area of fluency disorders. The type of continuing education experience that was identified as being the most preferred by school SLPs was fluency workshops. Most of these sorts of experiences are likely offered at the state and national level. These types of opportunities may not be readily available to many school SLPs. The needs of school SLPs in the area of fluency disorders should be analyzed and fluency workshops developed to meet the needs of this population in order to make experiences relevant and applicable. It may be that other opportunities, such as workshops at the regional or local level, are necessary. On-line education may also be an effective means to offering continuing education opportunities.

The utilization of fluency specialists by schools SLPs could greatly benefit children who stutter, because the SLP could receive guidance in diagnosing and treating
the child who stutters (Tellis et al., 2008; Van Riper, 1977). This sort of relationship could have the potential to enhance services provided. This is an idea that holds much promise as this study revealed that school SLPs are very interested in consulting with a fluency specialist. However, although the SLPs were highly interested in consulting with a fluency specialist, few were aware of any specialists in their area, as the number of fluency specialists is limited. Currently there are relatively few board recognized fluency specialists given the number of SLPs in the country. This limitation may pose a problem, as the greatest interest reported by the SLPs was consultation with a fluency specialist who made himself/herself available to the SLP. Thus, those specialists working in any state need to be proactive in helping educate SLPs in school districts in their state. Thus, the few in Ohio should be working to collaborate on education and service activities that will benefit SLPs and children who stutter in the state.

Another issue is that the majorities of these specialists seem to be employed in the university setting and are responsible for instructing courses on fluency and supervising clinical experiences, which leaves them little time for providing guidance to practicing SLPs. This study revealed that there is a small percentage of school SLPs who were interested in becoming a board recognized fluency specialist. These SLPs need to be identified and informed of the process of becoming a board recognized fluency specialist. Future research should explore the availability, willingness, and opportunities school SLPs have in integrating specialists into their treatment of children who stutter. The potential impact of a structured consultation between a school district and a fluency specialist would appear to be an important area of study. It may be that the consultative services would impact the perceived confidence and success of school SLPs when providing services to children who stutter, and may improve the quality of services for children who stutter. Fluency workshops, conducted by fluency specialists, could provide information regarding consultation with fluency specialists and help school SLPs identify specialists in their area. Additionally, identifying SLPs who are interested in pursuing board recognition in fluency disorders could provide opportunities for a greater number of fluency specialists to be trained. Finally, examining the requirements for becoming a board recognized fluency specialist is also important. It may be that the requirements for becoming a fluency specialist are inhibiting SLPs that are not in the university setting from earning specialty recognition.

Limitations of the Present Study
There were some limitations to this study. All of the participants from this study were school SLPs employed in Ohio, which was the focus of the study. Although these findings may be similar to SLPs throughout the nation, future studies that explore this topic might consider surveying SLPs from several states. Another limitation was the question regarding the number of clinical hours received in stuttering at the undergraduate, graduate, and CFY level. Many participants indicated that they were merely guessing at their hours, as they no longer remembered the clinical hours they received. Many of the participants had been in the field for a long period of time and no longer had access to that information. The question regarding past fluency courses was also a limitation. It was not clear how many participants did not receive any academic training in fluency disorders as the questions pertaining to courses solely and partially devoted to stuttering were asked as two separate questions. This may have caused the percentage of SLPs without any academic training to be falsely high or low. Participants also mentioned their difficulty in recalling the focus of their courses in stuttering. This may have caused the percentages of course content to be skewed.

Another limitation of the study was the depth of the questions. The survey did not allow participants to provide reasons for some answers. This information would have been helpful. For example, it would have been advantageous to know why clients who stutter were not receiving services in the schools. Future studies may allow participants to provide reasons to certain questions in order to gain more information. It also may have been beneficial to request that the responses to questions that could have more than one response be ranked. For example, SLPs were asked to identify what hindered their ability to provide services to children who stutter by checking the responses that applied to him or her. More information could have been obtained if the participants ranked their responses from most hindering to least hindering.
Conclusions
The present study was effective in answering the research questions related to SLPs’ experience working with children who stutter. The findings related to limitations clinical and academic training support past research. Additionally, findings from this study appear to support the notion that SLPs feel their lack of experience and success in providing therapy to people who stutter is related to their feelings of inadequacy in providing stuttering treatment. There does appear to be an interest in integrating a collaborative model with fluency specialists to improve the SLPs’ understanding of stuttering and its treatment. Additionally, there appears to be an interest in attending workshops related to stuttering, though there was an overwhelming perception that continuing education opportunities in stuttering are limited. The field needs to make strides in pursuing alternatives to providing training in stuttering treatment to SLPs who work in the schools, since the present models of academic training and continuing education appear to be less than adequate. Development of new programs will have an impact on educational services for practicing SLPs and students in Communication Disorders and clinical services for children who stutter. Future research should focus on developing and testing programs that might meet the needs of SLPs working with children who stutter in the schools. 

References
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APPENDIX A

SCHOOL SLPS EXPERIENCES WITH STUTTERING

DEMOGRAPHICS
(1) Your age: ____________________  Gender: ____________________  Ethnicity: ____________________
(2) What is your present position? ____________________
(3) In what setting(s) are you employed? ____________________
(4) How long have you been a speech language pathologist? ____________________
(5) How many years of professional experience have you had in the schools? ____________________
(6) How many of those years were in your present position? ____________________
(7) In what year did you earn each degree? BS/BA _______ MS/MA _______ Ph.D./Ed.D. _______
(8) Do you hold a: CCC-SLP _______ State License _______

School Certification _______ Temporary School Certification _______

EDUCATIONAL BACKGROUND IN STUTTERING
(1) Indicate the number of courses devoted solely to stuttering that you took at a college or university:

______ bachelor’s level  _______ master’s level  _______ doctoral level  _______ N/A

(2) Indicate the number of courses partially devoted to stuttering that you took at a college or university:

______ bachelor’s level  _______ master’s level  _______ doctoral level  _______ N/A

(3) What percentage of your classes on stuttering focused on: theory _______ diagnosis _______ therapy _______ N/A

(4) Estimate the number of clinical training hours you received in the diagnosis and treatment of people who stutter at the following training levels:

Undergraduate: _______ Diagnostic hours  _______ Treatment hours
Graduate: _______ Diagnostic Hours  _______ Treatment hours
CFY: _______ Diagnostic Hours  _______ Treatment hours

(5) Rate your academic interest in stuttering and fluency disorders.

1  2  3  4  5  very interested

not interested

CONTINUING EDUCATION
(1) Have you engaged in the following activities relevant to stuttering (check all that apply)

______ Workshops  _______ Conferences
______ Service Training  _______ Journal articles regarding Stuttering
______ Fluency Bootcamps  _______ Consultation with Specialist
______ Texts Regarding Stuttering  _______ Consultation with other SLPs (non-specialists)

(2) If you were going to attend continuing education in stuttering, which would you choose? (check all that apply)

______ Workshops (during school year)  _______ Conferences (2-3 day, school year)
______ Service Training  _______ Journal articles regarding Stuttering
______ Fluency Bootcamps  _______ Consultation with Specialist
______ Texts Regarding Stuttering  _______ Summer workshops
(3) How often do you engage in continuing education activities related specifically to stuttering?
   _____ less than once a year   _____ once a year   _____ twice a year
   _____ Three times a year   _____ four times a year   _____ other (please specify)

(4) Rate the quality of the continuing education activities that focused on stuttering that you have attended.
   1    2    3    4    5
   very poor  poor  fair  good  very good

(5) Rate your level of interest in continuing education in stuttering.
   1    2    3    4    5
   not interested  fair  good  very good

(6) Do you think that there are sufficient opportunities for continuing education in stuttering available to you?
   _____ Yes   _____ No

(7) Do you think that you have had a sufficient amount of education (both academic and continuing educational experiences) in stuttering?
   _____ Yes   _____ No

**EXPERIENCE/ABILITIES WITH STUTTERING**

(1) How many clients are on your caseload? ___________

(2) How many of your clients stutter? ___________

(3) What percentage of your clients are in the following groups:
   Articulation ________ Language ________ Fluency ________
   Voice ________ Other (Please specify) ____________________________

(4) How many people/children who stutter enrolled in your school are not presently being seen? ___________

(5) Indicate how you achieved your present level of competence with clients who stutter. (Check all that apply)
   _____ Formal education   _____ Experience with stuttering clients
   _____ Continuing education   _____ Collaboration with other SLPs
   _____ Other (Please specify) ____________________________

(6) Respond to this item: I think that I have had a sufficient amount of experience treating people who stutter.
   1    2    3    4    5
   strongly disagree  fair  good  very good

(7) Respond to this item: I have been successful in treating people who stutter.
   1    2    3    4    5
   strongly disagree  fair  good  very good

(8) What age group of people who stutter do you feel most successful treating?
   Pre-school   School Aged   Adolescents   Adults   None
   (5 & younger) (6-12)   (13-18)   (18+)

(9) What age group of people who stutter do you feel most confident treating?
   Pre-school   School Aged   Adolescents   Adults   None
   (5 & younger) (6-12)   (13-18)   (18+)
(10) Rate how these factors contribute to your level of comfort in treating people who stutter?

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Interest</td>
<td>1</td>
<td>2</td>
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<td>5</td>
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<tr>
<td>Experience</td>
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<td>2</td>
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<td>Exposure</td>
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<tr>
<td>Knowledge</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>Time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

(11) What are some of the factors that hinder your ability to provide treatment to people who stutter? (Check all that apply)

- Lack of Knowledge
- Lack of Experience (few clients)
- Lack of Time
- Lack of exposure
- Lack of Treatment Success
- Lack of interest
- Other
- None of the above

(12) Rate the following disorders as least preferred to treat to most preferred to treat.

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Least Preferred</th>
<th>Most Preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental Apraxia of Speech</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Reading/writing</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Language</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Articulation</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Fluency</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Voice</td>
<td>1</td>
<td>5</td>
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<tr>
<td>AAC</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Hearing disorders</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Autism</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

(13) How often do you see your clients who stutter (choose the item that most represents your service delivery)?

- 1x/week
- 2x/week
- 3x/week
- 4x/week
- 1x/month
- 2x/month
- 3x/month
- 4x/month
- 1x/every 6 weeks
- 1x/year

(14) What is the average duration of your treatment sessions with clients who stutter (choose the item that most represents your service delivery)?

- <10 minutes
- 11-20 minutes
- 21-30 minutes
- 31-40 minutes
- 41-50 minutes
- >60 minutes

SPECIALIZATION ISSUES

(1) Do you consider yourself to be a specialist in stuttering? _____ Yes _____ No

(2) Are you a board recognized specialist in fluency and fluency disorders (Specialty Board recognized)? _____ Yes _____ No

(3) Are you aware of the specialty recognition program in fluency disorders offered through ASHA and the Specialty Board on Fluency Disorders? _____ Yes _____ No
(4) Respond to this statement: If it were possible to obtain this recognition, I would be interested in becoming a recognized fluency specialist through the present program?

1 2 3 4 5
Strongly disagree  Strongly agree

(5) Respond to this statement: If classes/clinical experience were available through universities during a specialty program offered during the school year (August-June), I would be interested in attending in order to work toward fluency specialty recognition.

1 2 3 4 5
Strongly disagree  Strongly agree

(6) Respond to this statement: If classes/clinical experience were available through universities during a specialty program offered in the summer, I would be interested in attending in order to work toward fluency specialty recognition.

1 2 3 4 5
Strongly disagree  Strongly agree

(7) Do you know of any fluency specialists in your area? Yes No

a. If so, how many are in your area? __________

(8) Have you ever consulted a fluency specialist? Yes No

a. If so, how many times per year do you consult the specialist:
   i. Less than once a year 2-3 times 4-5 times 5+ times

(9) Respond to this statement: If there was a fluency specialist in my area, I would consult with this specialist.

1 2 3 4 5
Strongly disagree  Strongly agree

(10) Respond to this statement: If a fluency specialist made him/herself available to me (meetings, phone calls, email, etc.) I would consult with him or her.

1 2 3 4 5
Strongly disagree  Strongly agree

(11) Respond to this statement: My school district or clinical setting would benefit from hiring a fluency specialist.

1 2 3 4 5
Strongly disagree  Strongly agree

(12) Respond to this statement: My school district would benefit from a structured consulting arrangement/relationship with a fluency specialist.

1 2 3 4 5
Strongly disagree  Strongly agree
Assessing Fluent Speakers’ Beliefs about the Causes of Stuttering: Clinical Implications and Therapeutic Strategies

Stephanie Hughes

Abstract
This study investigated 150 fluent speakers’ beliefs about the causes of stuttering. Qualitative and quantitative analysis of participants’ written, open-ended responses indicated that stuttering tends to be viewed as having an organic cause to a greater extent than psychological, genetic, environmental, or other causes. Of note, however, is that participants often indicated a great deal of uncertainty about the causes of stuttering, even if they were closely acquainted with someone who stutters. These results support the need for people who stutter to learn more about stuttering and to share this knowledge with members of the general public. Surveying fluent speakers for their impressions of stuttering and its causes is discussed as one therapeutic activity with benefits for both people who stutter and fluent speakers.

The article author, Stephanie Hughes works for the University of Toledo and has no relevant financial or nonfinancial relationship to disclose.

Learning Objectives
(1) Describe the history of stuttering causation theory, including current theories
(2) Identify at least three commonly held perceptions of stuttering causation held by fluent speakers
(3) Incorporate activities that educate clients and fluent speakers into their therapeutic practices with people who stutter

Theories about the causes of stuttering have tended to come and go over the centuries. We now believe that stuttering is caused by the interaction of environmental factors and factors that are intrinsic to the individual, such as genetics, cognition, language, and emotions (Smith & Kelly, 1997). But for many years stuttering was considered the result of a psychological problem (e.g., Bryngelson, 1937) or overly-anxious parents and caregivers (Johnson, 1942). These old theories of stuttering still seem to affect people who stutter (PWS), as many PWS report that they are given unhelpful assistance or misguided advice by parents and speech-language pathologists (Hughes, Gabel, Goberman, & Hughes, 2011).

These types of sub-optimal reactions to stuttering by fluent speakers often have a negative effect on PWS. For example, fluent speakers’ actual or anticipated reactions to stuttering can inspire an emotional reaction in PWS and can influence the severity of stuttering (Bloodstein & Ratner, 2008). As such, listener reactions to stuttering may affect PWS in a wide variety of contexts, including the formation of intimate and social relationships (Boberg & Boberg, 1990; Linn & Caruso, 1998) and educational experiences (Daniels, Gabel, & Hughes, 2012). In addition, fluent speakers tend to associate several negative traits such as shyness, anxiety, guardedness, and tension with PWS (Woods & Williams, 1976). These attitudes are worrisome because negative stereotypes may lead to prejudice and discrimination (Smart, 2001).

One aspect of the stuttering literature that has received relatively little attention is the relationship between perceived causality of stuttering, familiarity with PWS, and fluent speakers’ attitudes toward PWS. In one notable exception (Boyle, Blood, & Blood, 2009) university students were given vignettes about a person who stutters in which the cause of stuttering was noted to be psychological, genetic, or unknown. The students then completed a social distance scale (degree to which they would be willing or unwilling to have the hypothetical person who stutters in the vignette as a roommate, colleague, child caretaker, etc.) and bi-polar adjective scales, in which students rated the hypothetical person who stutters on a variety of traits (nervous-calm, open-guarded, etc.). While there was no association between knowing someone who stutters and ratings on the social distance and attitudes scales, participants who read the vignette with the
psychological cause of stuttering wanted a greater amount of social distance from the hypothetical person who stutters, and they used more negative adjectives as descriptors.

In the Boyle et al. (2009) study the researchers told participants the supposed cause of stuttering (and debriefed them on the actual causes of stuttering at the end of the study). What do fluent speakers know about the cause of stuttering in general? Few studies have asked this question, though a study by Ham (1990) comes close. Ham conducted a randomized survey of fluent speakers by telephone and asked a number of open-ended questions related to stuttering. One of these questions, “What type of person is most likely to develop stuttering?” resulted in a range of opinions that point to fluent speakers’ views on factors that are associated with stuttering. While many participants gave opinions that were classified as miscellaneous (i.e., being tickled as a baby), 38% of participants’ opinions indicated that PWS are likely to have psychological problems, while only 5% indicated physical or neurological problems and less than 3% suggested that stuttering is genetic or inherited. Approximately 16% of responses indicated that participants did not know what causes stuttering. This uncertainty as to the cause of stuttering is striking given that nearly 75% of participants knew someone who stutters. These results suggest that the nature and cause of stuttering is not well understood by the general public.

Rationale
Few studies have examined, in a qualitative way, the nuances of fluent speakers’ beliefs about the causes of stuttering, and how variables such as gender and familiarity with PWS influence such beliefs. Such nuances can have clinical implications for SLPs and their clients who stutter. Educating others about stuttering can be a powerful clinical tool for both SLPs and PWS, but it is necessary to first understand what fluent speakers’ impressions of the causes of stuttering are in order to better address these issues. Furthermore, Ham’s (1990) study is over 20 years old, and it is time to reevaluate what fluent speakers know about the causes of stuttering, as attitudes toward disability often shift over time (Munyi, 2012). Thus, the research questions that guided this study are:

1. What do fluent university students report as the cause(s) of stuttering in an open-ended response format?
2. How have attitudes toward the cause of stuttering shifted over time (e.g., since Ham’s study in 1990)?
3. Does gender or familiarity with PWS influence the perceived cause(s) of stuttering?

Methods
Design
This study utilized a multistrand conversion mixed model design (Tashakkori & Teddlie, 2003) with an emphasis on qualitative methods. Mixed model designs integrate both qualitative and quantitative approaches throughout many stages of a study (e.g., the research purpose/questions, methods section, and inferences drawn from the data). The mixed model design of this study was necessary in order to more clearly examine and understand the attitudes of large numbers of university students toward stuttering and PWS.

Participants
A total of 150 university students (68% women and 32% men) participated in the study. The average age of participants was 22.5 years (SD = 6.18) with a range of 18-58 years. Participants were required to be at least 18 years of age, have no history of stuttering, and be enrolled in a major other than communication disorders. Participants reported a variety of academic majors from among the university’s colleges. Participants varied in terms of their familiarity with PWS and ranged from knowing no one who stutters to knowing nine PWS (M = 1.42, SD = 1.51). Thirty-seven participants (24.7%) reported not knowing anyone who stutters. The remaining 112 participants reported knowing a combined total of 265 PWS.

Instrumentation
A written survey was developed for use in this study. The first part of the survey was a demographic questionnaire that asked participants to provide such information as their age, gender, and academic major. Participants were also asked to indicate whether they considered themselves to be a person who stutters (either currently or in the past). Participants indicated whether they were acquainted with someone who stutters, and if so, described how well they knew that person (e.g., “not very well,” “well,” or “very well”). The second part of the survey asked the open-ended question “What do you think causes stuttering?” and gave participants a blank page to write their answer. Participants were instructed to answer openly and

25
honestly, and to explain their answer to the best of
their ability.

**Data Collection**
Participants were recruited from a total of 38
classrooms on a university campus. The purpose of the
study and participants’ responsibilities were explained
using a standard script. It was emphasized that even
students who did not know someone who stutters
were welcome to participate in the study, as the inclusion
of participants with different levels of familiarity with
stuttering was necessary to provide a broader
perspective from which to analyze and interpret the
data both qualitatively and quantitatively. Students
who volunteered to participate received a written survey
and consent form in a return envelope. As an incentive
to participate, a form to enter into a drawing to win an
iPod Shuffle was also included with the survey. Students
who took a survey were asked to place their name and
e-mail address on a sign-up sheet so that response rate
data could be obtained and friendly reminders to
complete the survey could be sent via e-mail at weekly
intervals.

**Qualitative Data Analysis**
Participants’ written responses to the survey questions
were typed into a Microsoft Word document. The
process for analysis of qualitative research as proposed
by Maxwell (2005) was used to analyze the qualitative
data. In the first step in the analysis process, the author
read over the data as it became available and took
notes regarding initial impressions. This initial reading
assisted in the development of preliminary ideas about
the nature of participants’ attitudes and how
participants’ responses could be categorized and
organized were developed. This process, called coding,
was used to develop relationships among participants’
statements that allowed for comparisons of the data. A
statement was classified as a unit of meaning, often one
or two sentences long, that described an idea about the
cause of stuttering. For example, the response
“Sometimes stuttering is passed down by a family
member. Other times people stutter because they are
nervous” was counted as two statements that were
coded as “inheritance” and “emotions” respectively.
Two peer reviewers collaborated on the development
of these codes and helped gather measures of inter-
rater reliability (see the discussion of credibility and
reliability, below). Once the codes were established the
data were arranged into themes, which allowed the
author to present the broader issues that were
representative of participants’ individual responses
(Maxwell, 2005). The two peer reviewers were also
involved in the formation of themes, and they and the
author were in agreement that all themes represented
the larger data set.

**Credibility.** As this study was primarily qualitative in
nature, the assumptions for credible qualitative
research were met. Qualitative researchers do not
employ control groups, randomized sampling of
participants, or other methods that are designed to
account for extraneous variables or other threats to
validity (Maxwell, 2005). Thus, there is a need to
establish that the qualitative methods and the
conclusions drawn by qualitative researchers are
credible and do not stem from personal bias. In
qualitative research, the term validity is used to refer to
the “correctness or credibility of a description,
conclusion, explanation, interpretation, or other sort of
account” (Maxwell, 2005, p. 106). The validity of the
research process and the conclusions drawn from the
data in this study were addressed in a variety of ways as
described by Creswell (1998). The types of validation
procedures that were used in this study included
triangulation, providing detailed descriptions of the
research process and the participants, and peer review.
Triangulation involves the “use of multiple and different
sources, methods, investigators, and theories to...shed
light on a theme or perspective” (Creswell, 1998, p.
202). The use of quantitative as well as qualitative
research questions, data analysis procedures, and
inferences was also a form of triangulation. This study
incorporated these procedures to ensure that the
themes and conclusions that were derived from the
data were trustworthy and as free from the author’s
personal bias as possible. Peer reviews provided
constructive criticism from people who were not
directly involved in the research process and had no
stake in the study’s outcome. Two graduate students
who did not have a history of stuttering served as peer
reviewers. These individuals had both completed
graduate-level coursework in stuttering and had
experience with mixed methods research.

**Reliability.** The author and the two peer reviewers as
described above developed a list of codes that
represented the data set. Once the reviewers and
author were in agreement as to these codes, the author
coded the entire data set. A subset (25%) of all
participants’ responses were then recoded by both reviewers and the author to gain measures of inter-rater and intra-rater reliability. Percent agreement was 92.8% for inter-rater measures and 100% for intra-rater measures. Cohen’s Kappa was also determined, as it is a more robust measure than percent agreement because it accounts for agreements that may occur by chance (Sim & Wright, 2005). The Cohen’s Kappa coefficient was .890 for the inter-rater measure and 1.00 for the intra-rater measure. Cohen’s Kappa coefficients that fall between .81–1.00 indicate almost perfect agreement (Landis & Koch, 1977).

**Quantitative Data Analysis**

Quantitative data analysis was conducted after the qualitative analysis was complete. The quantitative analysis was descriptive in nature and served to provide additional information about participants and their attitudes toward stuttering and PWS. The demographic information, including participants’ age, academic major, academic status (e.g., undergraduate, graduate student), and number of acquaintances who stutter was entered into a statistical processing software program (SPSS) and analyzed to obtain frequency counts, percentages, and other types of descriptive data for each of these variables. Once themes were established via qualitative analysis, participants’ statements were analyzed for frequency counts and percentage data as a means of helping to make broader inferences about college students’ attitudes toward stuttering and PWS. Multivariate Analysis of Variance (MANOVA) for gender, level of familiarity with PWS, and interactions between gender and familiarity were conducted to determine whether group differences on survey responses existed for men versus women or for participants who were more familiar versus less familiar with PWS. It should be noted that the quantitative data were derived entirely from analysis of participants’ qualitative responses, and so traditional validity measures for quantitative research are not applicable (see Credibility, above).

**Results**

**Descriptive Findings**

**Qualitative.** Six themes about the causes of stuttering were generated from participants’ responses. These themes included organic causes, (e.g., physiological causes, neurological causes, disease processes), genetic causes, psychological or emotional causes, developmental or environmental causes, miscellaneous causes, and statements in which participants indicated that they were uncertain as to the cause of stuttering.

**Quantitative.** All of the 150 participants responded to the question for a total of 251 statements about the causes of stuttering (M = 1.67, SD = 0.92). Fifty-eight participants (38.7%) provided multiple statements that represented more than one theme. Organic causes of stuttering accounted for 41.4% of participants’ statements (n = 104, M = 0.69, SD = 0.69). Psychological or emotional causes accounted for 24.3% of statements (n = 61, M = .21, SD = 0.44), whereas 12.4% related to genetic causes of stuttering (n = 31, M = 0.41, SD = 0.61). Developmental or environmental causes of stuttering accounted for 10.8% of responses (n = 27, M = 0.18, SD = 0.42). Miscellaneous statements accounted for 11.9% of responses (n = 30, M = 0.20, SD = 0.46). Finally, 20.3% of statements indicated that participants were unsure about the cause of stuttering (n = 51, M = 0.34, SD = 0.48).

**Advanced Analyses**

**Qualitative (Thematic) Results.** The most strongly represented theme (41.4%) was that stuttering was organic in nature. These types of statements ranged from relatively unsophisticated answers such as “something in the brain” or “a neurological problem,” to more complex answers. For example, one participant wrote that, “Maybe [stuttering is caused because] something in the brain didn’t develop all the way or the brain has trouble sending a message to the muscles used for speaking.” Another participant gave a similar answer: “I am guessing it has to do with the sending and receiving of codes from the brain...” In addition to beliefs that stuttering is neurological in nature, other types of miscellaneous yet organic causes of stuttering were provided. Participants indicated that stuttering is related to hearing, so that stuttering “has something to do with your hearing and how you do or don’t hear yourself.” They also suggested breathing patterns, problems with the “voice box,” and abnormalities with the speech musculature as causes of stuttering. The effects of drug use on the body, disease processes, and physical trauma were also reported. These responses suggest that these participants believe that stuttering is, at least in part, caused by neurological, physiological or neuropsychological differences as compared to fluent speakers.
The second most reported belief about the cause of stuttering (24.3%) was that it is due to psychological or emotional factors. Nervousness, anxiety, and strong emotions all seemed to feature prominently in the responses of participants who indicated that stuttering has a psychological basis. For example, one participant simply wrote that stuttering was caused by “just nervousness, I guess.” Other participants indicated that stuttering was caused by nerves, anxiety disorders, or low self-esteem. These types of responses and others like it suggest that for some participants, stuttering appears to be directly related to or occur simply because of the emotional state of individuals who stutter. It would, therefore, seem to indicate that PWS are perceived as chronically nervous, so that this characteristic is a part of their basic temperament, or that every time people stutter they do so because they are nervous.

One participant reported that stuttering appears to be the result of social stress:

“I believe stuttering is possibly a nervous reaction to a social situation. Similar to the comic version of a guy being unable to speak to a girl he finds attractive. The more nervous they get the more they stutter, so I believe people who stutter may be under the same type of manifested social stress.”

Thus, according to this and other participants’ beliefs, PWS are perceived as being pressured and stressed as they speak to others, and so stuttering is a tangible manifestation of this nervousness and discomfort.

Genetics was reported as the cause of stuttering in 12.4% of participants’ statements. Most of these types of statements were simple one-word answers, i.e., “genetics.” Other types of responses that were coded as genetic included such answers as “a genetic mutation,” “inherited,” or “present from birth.” Participants who indicated genetic or inherited causes of stuttering were typically straightforward in their answers; however, there was still a degree of uncertainty attached to some participants’ responses. For example, “It could be passed from one generation to another. I really am not sure but I know that it is not that person’s fault that they stutter.” Similarly, “I don’t know for sure, but I assume it is tied to genetics.” Thus, the genetic transmission of stuttering seems plausible to these participants, though relatively few of them seemed to definitively state that genetics causes stuttering.

Stuttering as a developmental disorder that is learned or the result of environmental factors, particularly in childhood, was also suggested as a cause of stuttering (n = 27, 10.7%). The nature of these environmental factors seemed to suggest that caregivers’ actions can lead to stuttering in children. For example, one participant wrote that stuttering results “from children being abused at an early age of their childhood and when children are tickled at their feet a lot at the ages of one and three.” “Baby talk from parents” was suggested as a potential cause of stuttering, as was “a lack of support or interest from parents (and other rearing parties).”

Sometimes these opinions appeared to stem from the media:

“I read an article a few weeks ago that stated a link had been discovered between damaged or diminished self-confidence—such as overcritical parents or teachers in early childhood—and the development of stuttering problems later in life. I think this study may be on the right track.”

Thus, it would appear that older theories about stuttering that in part reflect Johnson’s (1942) diagnosogenic theory are still being disseminated despite more widely accepted theories about how stuttering develops in childhood (e.g., Smith & Kelly, 1997).

Other environmental factors included children who were exposed to adults, especially parents, who stutter, as they were learning to speak. Thus, stuttering was perceived as both an environmental and learned behavior. For example, one participant wrote that stuttering occurs “when a child is taught to talk and their parent stutters, [and] they pick up the trait too.” Participants recognized that stuttering is largely developmental, in that it occurs as children are developing expressive language skills. One participant stated: “At some point when a person learns to speak, maybe they have trouble saying words but can never quite properly develop saying them.” Similarly, another participant wrote, “I think people develop stuttering from not being able to speak properly. Stuttering, I believe, is a speech impediment that people develop when they are young.” These types of statements
indicate that some participants believe stuttering to be the result of improperly learned speaking skills rather than being caused by organic, genetic, or psychological causes. Why one should fail to learn to speak properly was not clearly stated by these participants, and again seems to indicate uncertainty about participants’ perceptions of stuttering causation.

Participants gave general or miscellaneous comments about the causes of stuttering which did not fit into any of the established themes (n = 30, 12%). Some responses indicated that PWS do not have clear thoughts, lack verbal communication skills, or speak too quickly. Others stated that people stutter when they are interrupted, do not know the answer to a question, or are trying to get someone’s attention but are ignored. One person stated that stuttering is “just a disability” that does not have a cause; other participants also indicated that stuttering is a general speaking impairment and did not suggest a cause. Likewise, one participant indicated that stuttering is “caused by God,” so that it is just one of the many variations that people can have. That so few people offered miscellaneous causes of stuttering while the rest of the responses fell into one or more of the established themes indicates that there is consistency among the participants’ perceptions regarding the causes of stuttering, even if people are not entirely sure about the accuracy of their beliefs.

The final theme consisted of responses in which participants indicated that they were unsure about the cause of stuttering (n = 51, 20.3%). These statements indicated that participants had “no idea” or “no clue” about what causes stuttering. Participants were also likely to stipulate that they did not know what causes stuttering even if they provided their “best guess.” For example, a participant wrote, “I honestly have no clue, but I am guessing it has to do with the sending and receiving of codes from the brain. I could be very wrong.” These types of statements confirm that the participants in this study were unsure about the cause of stuttering, and that those participants who did provide a cause were hesitant about the accuracy of their answers.

Quantitative Comparisons. Multivariate Analysis of Variance (MANOVA) was conducted to determine if responses differed according to gender, familiarity, or interactions between gender and familiarity for participants’ statements about the causes of stuttering and the total number of statements provided by participants. There was no significant difference (p < .05) for any of the themes according to gender, familiarity with PWS, or gender/familiarity interaction. These findings suggest that men and women did not significantly vary in terms of the types of responses they provided to the survey question; nor did responses differ on the basis of how well participants knew PWS.

Discussion

Summary of Results

These findings indicate that the participants in this study described many of the causes of stuttering that have been theorized in the research literature over the past several decades (e.g., Bloodstein & Bernstein Ratner, 2008). The majority of participants believed that stuttering has at its core a physical or organic cause and is typically neurological in nature. In addition, psychosocial or temperamental issues were the second most reported cause of stuttering and seemed to indicate a belief that people stutter because they are nervous or anxious, or that stuttering is exacerbated by such emotions, even if an organic cause is at its root. Fewer participants tended to believe that stuttering is a result of one’s environment; however, those participants that did make these types of statements often indicated that parents and caregivers are essentially to blame for the development of stuttering (e.g., parents are not supportive or attentive).

Regardless of which types of etiologies were identified, it is clear that many participants had only a vague sense of what causes stuttering. Furthermore, people who claimed to know at least one person who stutters very well did differ in their impressions from those who did not know anyone who stutters, suggesting that familiarity with PWS does not influence one’s perceptions of the causes of stuttering.

In addition to these findings, one of this study’s research questions was how these results compare to those of a similar, albeit older, study in which members of the general public were asked what type of person was likely to stutter (Ham, 1990). While the methodologies between this and Ham’s study are different and comparisons should be made cautiously, it is worth noting that 38% of statements in Ham’s study indicated that PWS were likely to have psychological problems and that only 5% indicated organic or neurological problems. In contrast, this study found that
24% of statements indicated a psychological cause of stuttering; whereas 41% indicated an organic cause. It seems feasible that university students are more likely to believe that stuttering has organic rather than psychological causes. Whether this apparent change in perception is due to methodological differences, beliefs of university students versus the general population, or is a byproduct of changing attitudes toward disability over time will require future research.

Clinical Implications
The results of this study suggest that the causes of stuttering are not well understood by the general public, including those who are familiar with PWS. People who stutter may be surprised by how little their friends, family members, teachers, co-workers, and others know about stuttering and its causes. Clinicians can help empower their fluency clients by clearly describing and identifying key aspects of stuttering, including its causes. For example, it may be very helpful to emphasize to clients that developmental stuttering is not caused by lack of intelligence, psychological issues, or poor parenting). One helpful strategy may be to have fluency clients briefly interview fluent speakers about their knowledge and beliefs related to stuttering. A survey can be created by clients with the help of their clinician and can contain such questions as: “Do you know anyone who stutters?” “What do you think about stuttering?” “What do you think causes stuttering?” “What advice would you give to people who stutter?”

This survey activity has been used extensively in intensive fluency clinics in Northwest Ohio (Gabel, Daniels, & Hughes, 2012) and clients are often surprised by the lack of knowledge that exists about stuttering among the general population. Surveying gives fluency clients the opportunity to: (a) disclose stuttering to listeners as they approach both familiar and unfamiliar people and ask to survey them; (b) practice therapy techniques such as voluntary stuttering, maintaining eye contact, etc. outside of the therapy room; (c) learn how much—or how little—fluent speakers know about stuttering; and (d) educate others about the nature of stuttering and how to interact with someone who stutters. Clinicians should model approaching an unfamiliar listener, identifying as a person who stutters, obtaining permission to survey the listener, and completing the survey with appropriate use of therapeutic strategies before they ask the same of their clients.

Final Thoughts
This and other research studies indicate that while attitudes toward stuttering may be getting better, and people may know more about the causes of stuttering than in the past, most people who are not speech-language pathologists—including friends and family of PWS—do not seem to know much about stuttering in general. Clinicians should take this into account as they work with fluency clients and their families. In addition, participants in this study indicated curiosity toward the causes of stuttering and requested more information on the topic. Accordingly, public service announcements or other forms of education about stuttering would seem to be appreciated by the public. Speech-language pathologists can help by giving in-services to colleagues and general education students, disseminating brochures and other information from the Stuttering Foundation (www.stutteringhelp.org), and correcting misapprehensions about stuttering and its causes as they become evident during interactions with members of the general public. ♦

References:


Smart, J. (2001). *Disability, society, and the individual.* Austin, TX: Pro-Ed.


Management of Cognitive-Communicative Deficits and Acquired Neurogenic Stuttering in a Case of Toxic Metabolic Encephalopathy

Lee Ellis and Laurie M. Sheehy

Abstract
Toxic metabolic encephalopathy (TME) involves acute or chronic cerebral dysfunction resulting from metabolic factors that adversely affect the brain. TME results in an altered mental state and a variety of symptoms, which may include cognitive-communicative problems and neurogenic stuttering. This case study describes a 57-year-old man with a diagnosis of TME who exhibited cognitive-communicative impairments and acquired neurogenic stuttering. The characteristics, assessment, and treatment of this patient’s communication disorders over the course of more than two years are discussed.

The article authors, Lee Ellis and Laurie M. Sheehy work for the University of Toledo and have no relevant financial or nonfinancial relationship to disclose.

Learning Objectives
(1) Define toxic metabolic encephalopathy
(2) List treatment techniques applicable for persons with neurogenic stuttering
(3) Compare and contrast the performance of the case review with the literature regarding neurogenic stuttering

Acquired neurogenic stuttering has been reported in conjunction with a number of conditions affecting the central nervous system, including strokes, traumatic brain injuries, and various neurodegenerative diseases. In these cases, actual structural changes in the brain can be identified. Neurogenic stuttering has been reported in other conditions or diagnoses in which structural changes are not identified. For example, several case studies (Bertoni, Schwartzman, Van Horn, & Partin, 1981; Byrne, Byrne, & Zibin, 1993; Pimental & Gorelick, 1985) have reported stuttering associated with toxic metabolic encephalopathy (TME). TME involves “cerebral dysfunction in the absence of structural brain disease” (Chalela & Kasner, 2012, p. 2). According to Wedro (2012, p. 3), TME is a “broad category” that describes abnormalities of water, electrolytes, vitamins, and other chemicals that negatively impact brain function. Causes of TME are diverse and may include infection, systemic disease, organ failure, high or low blood sugars or sodium levels, reactions to a variety of chemicals, and medication side effects adversely impacting neurotransmitters in the brain (Wedro, 2012; Chalela & Kasner, 2012). TME is common among critically ill patients but appears to be underrecognized and undertreated, particularly in patients who require mechanical ventilation (Chalela & Kasner, 2012).
Although each specific cause of TME results in a particular pathophysiology, all types of TME eventually interrupt polysynaptic pathways, alter excitatory-inhibitory amino-acid balances, and interfere with the function of the ascending reticular activating system and/or its projections to the cerebral cortex, leading to impaired arousal and or awareness (Chalela & Kasner, 2012). Thus, the hallmark of encephalopathy is an altered mental state. Progressive loss of memory and cognitive ability, subtle personality changes, lethargy, and progressive loss of consciousness may occur. Other symptoms may occur, ranging from myoclonus, nystagmus, muscle atrophy, and weakness to dementia, seizures, and loss of the ability to swallow or speak (National Institute of Neurological Disorders and Stroke, 2010).

While cognitive-communicative deficits are common consequences of encephalopathy, acquired stuttering has been noted in a few reports. Reports of sudden onset stuttering in adults diagnosed with metabolic encephalopathy have involved individuals who exhibited stuttering during a hypoglycemic condition (anorexia), stuttering following administration of contrast material for neurodiagnostic tests, such as mylenography, or stuttering following injection of various other drugs. In these cases, stuttering was often transient (e.g., Byrne, et al., 1993; Bertoni, et al. 1981), lasting a few hours or several days, or occasionally was persistent (e.g., Pimental & Gorelick, 1985).

Byrne et al. (1993) described a 25-year-old man with severe anorexia whose hypoglycemic condition was associated with stuttering. Stuttering consisted of frequent repetitions of syllables, particularly at ends of words and while finishing sentences. Stuttering occurred on both substantive and function words. The patient showed annoyance but no abnormal anxiety or distress at his inability to speak fluently. Within seven days of hospitalization, the young man’s speech returned to normal as the hypoglycemic condition improved.

Bertoni et al. (1981) reported the cases of two men who received metrizamide (a commonly used contrast material) in conjunction with a myelogram conducted as part of a diagnostic work up for a complaint of low back pain. One man, age 60 years, experienced severe asterixis, stuttering speech, and mental confusion. The stuttering reportedly persisted for 7 days and then speech returned to normal. The second man, age 48 years, experienced seizures, stuttering, and disorientation to time and place. These symptoms disappeared within 24 hours. Specific characteristics of these patients’ stuttering were not described.

Pimental and Gorelick (1985) described cases of a 62-year-old man and a 54-year-old woman who both exhibited stuttering as well as Broca’s aphasia and apraxia of speech following administration of metrizamide for myelography. These patients continued to stutter for several months following the metrizamide injections. The 62-year-old man exhibited “severe neurogenic stuttering” consisting of frequent sound, syllable, and word repetitions, numerous prolongations of initial sounds in words, and blocks accompanied by facial grimaces. In a follow-up medical examination five months after his discharge, this man continued to exhibit “mild disfluencies.” The 54-year-old woman demonstrated “moderately severe neurogenic stuttering” characterized by frequent sound, syllable, and word repetitions and prolongations. In a follow-up telephone call three months after discharge, she reportedly stuttered infrequently during conversation.

In the present case study, we discuss a 57-year-old man with a diagnosis of TME who exhibited a number of cognitive-communicative impairments and stuttering behaviors that proved to be particularly troublesome to him. The purpose of this study is to provide a detailed report of this gentleman’s cognitive-communicative and stuttering characteristics and of the assessment, treatment, and follow-up provided over the course of more than two years.

**Case Description**

JG, a 57-year-old right-handed man who was in relatively fair health and working full-time, developed respiratory distress in December 2009 with subsequent sinus tachycardia, pericardial effusion, and bilateral lung infiltrates requiring hospitalization. In March 2010, he was hospitalized again for respiratory distress with infiltrative changes and flash pulmonary edema requiring intubation and mechanical ventilation. He was maintained on a respirator for two weeks and during this period experienced acute kidney failure. After being removed from the respirator, he did not speak for five days. When he did begin to speak, his speech was characterized by stuttering behaviors. He was disoriented and confused. A CT scan was performed and
findings were negative for bleed damage, implicating more global damage to the brain. He was diagnosed with severe TME resulting from his medical conditions. Prior to his diagnosis of TME, JG had earned a bachelor’s degree with majors in speech, political science, and philosophy as well as a Juris Doctorate and had completed one year of graduate school in communications. He had his own law practice for 23 years specializing in wrongful death and criminal suits. JG was employed by a corporation where he had been the loss prevention officer for five years. He was actively involved in political speech writing activities, writing and composing music and songs, singing in operatic musicals, and playing wind instruments.

**Intervention**

**Course of Cognitive-Communicative Treatment**

After being extubated, JG was extremely debilitated and was placed in a skilled nursing facility (SNF) where he received rehabilitation services for four weeks. Table 1 details his level of communicative performance from admission to discharge. As can be seen, JG exhibited moderate cognitive-linguistic deficits that improved to mild impairments with treatment. (All reported results were based on informal measures administered by staff speech-language pathologists in the SNF).

Following discharge, JG received cognitive-communicative therapy at the outpatient center of a hospital. He was seen by the second author for a total of 29 speech-language intervention sessions from May through December 2010. Table 2 indicates results of a May 2010 evaluation, which revealed intact primary/secondary language skills with no evidence of aphasia, dysarthria, or apraxia of speech. Deficits were present in fluency of speech and in cognition (high level word-finding deficits, information processing [speed and capacity], and verbal memory).

On the surface, the patient’s verbal memory skills appeared to be average; however given that JG’s academic aptitude was "High Average" and the Verbal Memory Index was 18-21 points lower, this was considered clinically significant. It suggested that the patient’s verbal memory skills had been compromised by the encephalopathy and were still in need of remediation.

| Table 1 |
| JG’s Communicative Performance from Admission to Discharge |
| Communication-Cognitive Area | April 1, 2010 (upon admission to SNF) | April 28, 2010 (upon discharge to home) |
| **Auditory Comprehension** | | |
| Auditory Discrimination | Moderate | Mild |
| 1 step commands | WNL | WNL |
| Multi-step commands | Mild | Mild |
| Answering yes/no questions | Moderate | Mild |
| **Reading Comprehension** | | |
| Words | WNL | WNL |
| Sentences/Paragraphs | Mild | Mild |
| **Expressive Language** | | |
| Repetition/Imitation | Mild | Mild |
| Word finding | Moderate | Moderate |
| Sentence formulation | Mild | Mild |
| Thought organization | Moderate | Mild |
| Fluency | Mild | Mild |
| **Cognition** | | |
| Attention | Mild | WNL |
| Orientation | Moderate | WNL |
| Organization/Sequencing | Severe | Mild |
| Problem | Severe | Mild |
| solving/reasoning | | |
| Immediate recall | Mild | Mild |
| Delayed recall | Severe | Mild |
| Long term/Remote memory | Mild | WNL |

A cognitive-communicative plan of care was established to maximize J.G.’s residual skills for competitive employment and avocational pursuits. Goals included to improve information processing, verbal memory skills, and higher level word finding/conceptualization skills. Following the period of cognitive-communicative therapy, the patient had improved from mild impairments to within normal limits in each of these areas.
Table 2
Results of Outpatient Evaluation of Cognitive-Communicative Performance

<table>
<thead>
<tr>
<th>Test</th>
<th>Score*</th>
<th>Performance Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boston Naming Test</td>
<td>Z-score = &lt;0.69</td>
<td>Low Average</td>
</tr>
<tr>
<td>Semantic Fluency</td>
<td>Z-score = &lt;0.69</td>
<td>Low Average</td>
</tr>
<tr>
<td>Symbol Digit Modality Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td>Z-score = &lt;1.64</td>
<td>Mild</td>
</tr>
<tr>
<td>Oral</td>
<td>Z-score = &lt;1.28</td>
<td>Low Average</td>
</tr>
<tr>
<td>Peabody Picture Vocabulary Test-4th Edition</td>
<td>SS= 116</td>
<td>High Average</td>
</tr>
<tr>
<td>Wide Range Achievement Test – 3rd Edition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>SS=119</td>
<td>High Average</td>
</tr>
<tr>
<td>Wechsler Memory Scale - Revised</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logical Memory I</td>
<td>Z-score = +0.39</td>
<td>Average</td>
</tr>
<tr>
<td>Verbal Paired Associates I</td>
<td>Z-score = 0</td>
<td>Average</td>
</tr>
<tr>
<td>Digit Span</td>
<td>Z-score = &lt;0.58</td>
<td>Average</td>
</tr>
<tr>
<td>Logical Memory II</td>
<td>Z-score = +0.65</td>
<td>Average</td>
</tr>
<tr>
<td>Verbal Paired Associates II</td>
<td>Z-score = &lt;=1.58</td>
<td>Mild</td>
</tr>
<tr>
<td>Verbal Memory Index</td>
<td>SS=98</td>
<td>Average</td>
</tr>
</tbody>
</table>

*Note: Z-score has mean of 0 +/- 0.64; Standardized Score (SS) has mean = 100 +/- 15

Course of Fluency Intervention

JG was also seen for fluency therapy at a university speech and hearing clinic. The patient was seen by the first author for approximately a two and one-half year period (between June 2010 and November 2012). Three phases of therapy occurred during this period. In Phase 1, lasting for approximately six months (June to December, 2010), the emphasis was on establishing increased fluency. Phase 2, which occurred over the next year (January through December 2011), focused on encouraging maintenance and generalization of increased fluency as well as providing support to the patient as he dealt with psychosocial aspects of his stuttering. Phase 3, lasting approximately a year (December 2011 through November 2012), focused primarily on follow-up to monitor status of fluency and provide continued patient support.

Phase 1: Establishing increased fluency. Table 3 displays the results of the initial fluency evaluation conducted in June 2010.

As indicated, the evaluation revealed mild stuttering behavior, which was reported by the patient to have a severe impact on his quality of life. Given the great importance of oral communication in this patient’s life and his reputation as an outstanding speaker, the sudden appearance of stuttering in his speech was extremely troubling to the patient and very obvious to those who knew him. The patient reported no previous speech or language problems. He did report that his younger brother stuttered, but that otherwise there was no other history of stuttering in his family.

Table 3
Results of Initial Fluency Evaluation

<table>
<thead>
<tr>
<th>Frequency of Stuttering</th>
<th>9% stuttered words in a 500 word conversational speech sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of Stuttering</td>
<td>Part and whole word repetitions, prolongations, blocks.</td>
</tr>
<tr>
<td></td>
<td>Primarily at the beginning of words, some in the middle, never in the final position. Stuttering occurred on both substantive and function words (primarily pronouns, conjunctions and articles).</td>
</tr>
<tr>
<td>Secondary Behaviors</td>
<td>Occasional loss of eye contact</td>
</tr>
<tr>
<td>Adaptation Testing</td>
<td>33% adaptation between first and last of five consecutive readings of 100 word passages</td>
</tr>
<tr>
<td>Fluency Interview (FI)</td>
<td>7 stuttered words per minute (SWPM) overall; Reading= SWPM; Monologue= SWPM; Conversation= SWPM;</td>
</tr>
<tr>
<td>S-24 Scale</td>
<td>Total score of 20. Indicating a frequency of negative attitudes more characteristic of a person who stutters than someone who does not.</td>
</tr>
</tbody>
</table>

Based on results of the initial assessment, the following initial goals/objectives were discussed with JG and agreed upon: increase overall fluency by decreasing within-word disfluencies to no more than 2-3% in conversations with the clinician over three consecutive sessions; and increase overall fluency in everyday
speaking situations as measured by patient ratings of no more than 1-2 on a stuttering severity scale (1 = no stuttering 9 = maximally severe stuttering).

During Phase 1, JG was seen once per week for individual, 90-minute sessions (for a total of 25 sessions). Several treatment procedures were used to varying extents during this phase to improve fluency. These procedures included intentional use of a “broadcast voice”; slowed rate; written scripts/rehearsal for specific speaking situations; aspects of the Ryan Fluency Program (Ryan & Ryan, 2005), which uses time-out for stuttering and positive reinforcement for stutter-free speech in gradually increasingly length and complexity of utterance; self-monitoring, self-evaluation and self-management activities (e.g., frequent patient self-rating using 1-9 scales of stuttering severity ([O’Brien, Packman, Onslow, & O’Brian, 2004] and speech naturalness [Martin, Haroldson, & Triden, 1984]); review and comparison of recorded samples of sessions to identify changes in fluency over time; and daily homework involving at least 15 minutes practicing speaking fluently in reading or monologue activities.

The reasons for selecting these procedures varied somewhat depending on the procedure. Several of these procedures (slowed rate, time-out, and self-management procedures) were chosen because they have been found to be effective in the treatment of adults with developmental stuttering (Bothe, Davidow, Bramlett, & Ingham, 2006) and many experts in the area of neurogenic stuttering have suggested such techniques may be appropriate for individuals with neurogenic stuttering (De Nil, Jokel, & Rochon, 2007; Helms-Estabrooke, 1999). The procedure of using the “broadcast voice” was actually discovered by the patient himself. During the initial evaluation, the patient paused momentarily during a reading task and indicated he was going to “try something out.” He began reading again using a voice similar to what he had used in his previous career when he had narrated political commercials. He referred to this as his “broadcast voice.” JG’s efforts to affect a broadcast voice resulted in speech characterized by increased connectedness between words in a breath group (i.e., fewer pauses within a breath group), decreased pitch and increased loudness, more exaggerated stress and intonation and a somewhat faster rate, all of which was associated with a decrease in the number and severity of moments of stuttering while using the broadcast voice.

JG’s deliberate use of a broadcast voice became a core procedure in therapy during much of this phase. During therapy sessions, he attempted to use this voice for successively longer periods of time, beginning with reading, then monologue, and finally conversation. Use of 1-9 point scales for stuttering severity and speech naturalness were integral to this work. JG was instructed to maintain a naturalness of 1-2 and a stuttering severity of 1-2 as he attempted to speak with features of the broadcast voice. These same scales were used by the patient and the clinician to evaluate his efforts. Table 4 indicates baselines of the patient’s performance on the initial fluency goals.

<table>
<thead>
<tr>
<th>Goals</th>
<th>Initial Baseline (Phase 1)</th>
<th>Final Baseline (Phase 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase fluency by reducing within-word disfluencies in conversation in the therapy session</td>
<td>9% (range: 8-10%)</td>
<td>3% (range: 1-4%)</td>
</tr>
<tr>
<td>Increase overall fluency in everyday speaking situations (based on patient self-ratings on a 1-9 stuttering severity scale)</td>
<td>7 (6-8)</td>
<td>3 (2-5)</td>
</tr>
</tbody>
</table>

Table 4

Results indicated the patient met the goal for increased fluency during therapy sessions and that he made noticeable progress on the goal of generalizing his use of more fluent speech to everyday situations. Table 5 indicates performance on formal measures during this period.

<table>
<thead>
<tr>
<th>Goals</th>
<th>SSI-4</th>
<th>S-24</th>
<th>OASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 Initial Baseline</td>
<td>23 (mild)</td>
<td>20 (severe)</td>
<td>3.89 (severe)</td>
</tr>
<tr>
<td>Phase 1 Final Baseline</td>
<td>5 (WNL)</td>
<td>20 (severe)</td>
<td>3.07 (moderate/severe)</td>
</tr>
<tr>
<td>Phase 2 Final Baseline</td>
<td>4 (WNL)</td>
<td>19 (severe)</td>
<td>2.83 (moderate)</td>
</tr>
<tr>
<td>Phase 3 Final Baseline</td>
<td>5 (WNL)</td>
<td>7 (WNL)</td>
<td>1.94 (mild/moderate)</td>
</tr>
</tbody>
</table>

Table 5

Clinically significant improvement in fluency was noted, as evidenced by a change from mild severity level to performance within normal limits on the Stuttering Severity Instrument-Fourth Edition (SSI-4) (Riley, 2009). Although he made no change in attitudes about
speaking, as measured by the Modified Erickson S-24 Scale (Andrews & Cutler, 1974), the overall impact of the problem changed from a severe to a moderate severe level on the Overall Assessment of the Speaker's Experience of Stuttering (OASES) (Yaruss, & Quesal, 2006).

**Phase 2: Generalizing and maintaining fluency.** JG had made progress in generalizing his gains to outside situations but continued in therapy with increased generalization and maintenance of improved fluency as the primary goals. As he maintained or improved upon his increased fluency over the next year (January through December 2011), therapy sessions were gradually reduced from weekly to biweekly and finally to monthly 45-minute individual sessions by the end of this period. A total of 16 sessions were conducted during Phase 2.

To facilitate maintenance of fluent speech, the patient was instructed to read daily while attempting to maintain his high level of fluency and increasing his rate of speech. The patient kept a daily journal of his practice sessions and daily speaking experiences. Rating scales were used for him to note status of fluency and rate during practice sessions. As in Phase 1, he continued to rate his stuttering each day on a 1-9 scale. He provided written comments regarding particularly positive or negative speaking situations.

Therapy sessions during this period revolved around discussions with the patient about salient experiences from his journal, including problems encountered and strategies he had used in dealing with these problems. Therapy sessions included obtaining real-time measures of stuttering and the patient summarizing his ratings for the period between sessions.

During Phase 2, the patient consistently reported overall ratings of his daily speaking as ranging between 1-3, with an average rating of 2. Real-time frequency counts of his stuttering during sessions over this period consistently indicated that stuttering occurred on less than 1-2% of words spoken. Table 5 displays results of formal measures that were readministered at the end of Phase 2. As indicated, he continued to perform within normal limits on the SSI-4 and his OASES impact score had improved from moderate-severe to moderate.

During discussions with the patient regarding his progress over the past year, JG indicated that he was feeling increased confidence in his ability to be fluent in most situations and was pleased with overall improvements. He indicated that he planned to continue home practice of reading aloud. At this point, JG felt that he did not need to meet with the clinician on a regular basis, but would continue to work on his fluency at home and meet periodically to review his progress.

At the end of this period, JG summarized what he felt were the factors that led to his improved fluency. He indicated he thought the key factors were (1) discovery of his fluent sounding “broadcaster’s” voice, (2) growing awareness that he was no longer having problems in situations where he had previously, (3) daily reading aloud as he varied his voice and rate while maintaining fluency, and (4) seeing the progress he had made from viewing a recorded sample of his initial therapy session in comparison to a recorded sample of one of his sessions from this phase of therapy.

**Phase 3: Following up.** From January to November 2012, JG was seen once every one or two months for brief follow-up visits during which fluency was monitored and the patient and clinician discussed his thoughts and feeling about his speaking. He continued to rate overall stuttering at 1-2 during everyday experiences and during follow-up visits; clinician ratings were in agreement at 1-2 during follow-up sessions. On rare instances when stuttering occurred, they were almost always single iterations of words or the initial syllable of words. From discussions with JG, it was apparent that he was continuing to make progress, especially in dealing with psychosocial aspects of the problem. He commented during one discussion that his reaction to the relatively few speaking situations in which stuttering occurred had changed from embarrassment or shame to curiosity or interest in how the stutter may have occurred. The infrequent moments of stuttering were now at times amusing to him. Changes in the impact of any residual stuttering were also apparent in his responses on the S-24 scale and the OASES. As Table 5 shows, he improved from an initial baseline score of 20 to a score of 7 on the S-24 Scale, suggesting that his attitudes about speaking were now more like those of a person who does not stutter than a person who does stutter. His OASES scores indicated that stuttering now has a mild to moderate
impact on his overall quality of life compared to the severe impact it was having when fluency therapy was initiated.

Discussion and Conclusion
The 57-year-old patient with TME responded positively to interventions to improve fluency and cognitive-communicative skills. His recovery of communications skills was characterized by relatively large gains during the first year in both cognitive-communicative and fluency skills. Although the patient himself attributed much of his progress to the various therapies he had received as well as to his own efforts to overcome his stuttering, and while these certainly seemed to facilitate his progress, it is likely that other factors, especially physiological recovery, also contributed to changes noted in communication skills over this period. A period of significant physiological recovery is generally expected in cases of sudden neurological insults, and certainly the limited literature on stuttering in other cases of metabolic encephalopathy (Bertoni, et al., 1981; Byrne, et al., 1993; Pimental & Gorelick, 1985) would support this conclusion. Beyond the first year of his recovery, however, the patient continued to demonstrate and report improvements in his fluency, particularly in generalizing fluency to everyday situations, and in his reactions to moments of stuttering and in the overall impact of stuttering on his life.

The specific characteristics of this patient’s stuttering at onset are of interest. They were present from his earliest attempts to speak again following a brief period of coma and mutism. Actual stuttering behaviors consisted of part and whole word repetitions, prolongations, and blocks. These occurred on both substantive and function words and primarily at the beginning of these words. Although some stutters, particularly brief stoppages or blocks, were noted on sounds within words, no instances of stuttering at the ends of syllables or words were noted. Stuttering tended to occur noticeably more during spontaneous conversation and monologue than during reading. An adaptation effect was noted during initial testing and consisted of a 33% reduction in stuttering frequency between the first and fifth reading of five consecutive readings of the same passage. Beyond occasional and very brief loss of eye contact and patient report of neck tension during stuttering moments, no other accessory physical characteristics were noted; moreover, these physical concomitants were not observed after the first phase of fluency therapy. Overall, JG’s stuttering behaviors suggested a mildly severe stuttering problem.

Compared to the few other cases of TME reported in the literature, there appear to be both similarities and differences in the stuttering characteristics noted. Stuttering behaviors of this patient most closely resembled those of the two patients described by Pimental and Gorelick (1985). In both these cases, stuttering persisted for at least several months beyond onset; reportedly both patients exhibited part-word and whole-word repetitions and prolongations, and one demonstrated blocks, during which a physical concomitant behavior of facial grimaces was noted. Byrne et al.’s patient, whose stuttering was transient, was similar to our patient in having frequent repetitions of syllables that occurred on both substantive and function words. However, this patient differed from other reported cases of stuttering in TME in that stuttering occurred at the ends of words rather than at the beginning, and he had disfluencies especially while finishing sentences. Information on adaptation effects, stuttering across speaking contexts (reading, monologue, and conversation), and responses to fluency probes were not reported in other case reports, so comparisons are not possible in these areas.

Comparisons of this patient’s stuttering with that of other cases of TME are also limited by an absence of information in previous studies regarding the psychosocial aspects of stuttering for these patients. With the exception of a brief comment by Byrne et al. (1993) that their patient showed annoyance at his inability to speak fluently, there is no reference in other studies to the impact of the stuttering on the patients described. Clearly, for our patient, a relatively low level of stuttering behaviors had a major impact on self-reported attitudes about speaking and quality of life. The impact of acquired stuttering for this patient appeared to go beyond reactions of annoyance or frustration, which are the reactions to acquired stuttering most commonly described in the literature as characteristics of individuals diagnosed with neurogenic stuttering. Certainly, the magnitude of this patient’s reactions may have been related to the extraordinary importance of communication in his life and the very high value he placed on this.
Overall, the findings of this case study support De Nil’s (2007) conclusion that patients with apparent neurogenic stuttering may be less easily distinguishable than once thought from cases of so-called “typical” or developmental stuttering. While some of our patient’s characteristics resembled those reported in the literature for neurogenic stuttering (e.g., disfluencies common on grammatical and function words; stuttering not only on initial syllables), others more closely resembled characteristics of developmental stuttering (e.g., adaptation effect; speaker appears anxious vs. just annoyed; stuttering varies with speaking situations).

Clearly, further investigation of stuttering in cases of TME is warranted. Future studies should include comprehensive evaluations of patients’ communication skills, including all aspects of the stuttering problem (attitudes, behaviors, and cognitive dimensions). Future studies including larger numbers of patients and detailed assessments of communication behaviors will provide a basis for examining the efficacy of speech-language intervention in these cases. 

References

Adolescents who Stutter and their Conversations with Friends and Family About Stuttering

Charlie Hughes, Rodney Gabel, Derek E. Daniels and Beth Sloan

Abstract
The current study used a qualitative approach to explore the experiences of 10 adolescents who stutter related to discussions they had about their stuttering with friends, siblings, and extended family members. Participant interviews were transcribed verbatim, coded, and analyzed for major themes. Three themes emerged from participant interviews which consisted of (1) “Stuttering is not directly talked about with friends”, (2) “Stuttering is rarely discussed with siblings” and (3) “Participants shared experiences with other family members who stutter.” Findings from this study suggest that stuttering is not directly discussed with siblings and friends; however, certain topics related to stuttering are discussed with family members who also stutter. Clinical implications are further discussed.

Learning Objectives
(1) Define the nature of qualitative research and how to analyze qualitative data
(2) Explain the clinical relevance of the current findings when working in speech therapy with adolescents who stutter
(3) State how adolescents discuss stuttering with other significant people in their environment

In the area of stuttering, little research has been conducted on adolescents who stutter (AWS) (Schwartz, 1993). Previous literature regarding AWS has explored perceptions of others towards AWS (Evans, Healey, Kawai, & Rowland, 2008; Flynn & St. Louis, 2011), anxiety levels (Blood, Blood, Maloney, Meyer, & Qualls, 2007), and discussions of clinical recommendations (Cooper & Cooper, 1995; Daly, Simon, & Burnett-Stolnack, 1994; Zebrowski & Wolf, 2011). One topic that has been explored with less frequency has been how AWS communicate with others about
stuttering. Despite little attention to this topic, some researchers have explored how adolescents disclose their stuttering. For instance, in addition to self-esteem and perceived stigma, Blood, Blood, Tellis, and Gabel (2003) explored disclosure strategies in 48 AWS and found that most participants reported not discussing their stuttering with others. Communication about stuttering was also mentioned in a study conducted by Hearne, Packman, Onslow, and Quine (2008) in their interviews with 13 AWS regarding their experiences with speech therapy. One of the themes that emerged from the data was that stuttering was not discussed with friends. Finally, Hughes, Gabel, Goberman, and Hughes (2011) found in their qualitative study that when adults who stutter were asked to reflect on their childhood and adolescent years, they reported not discussing stuttering openly with family.

The purpose of this study was to shed some light on how AWS discuss their stuttering with friends, siblings, and extended family members. Furthermore, the purpose of this study has clinical relevance, as other authors have discussed the importance and benefits of discussing stuttering openly with others as part of the speech therapy process (Bennett, 2006; Guitar, 2006). By exploring how AWS discuss their stuttering with these populations, clinicians will be better informed about the nature of AWS in the context of disclosing their stuttering with these individuals.

METHODS
Procedure and Participant Recruitment Procedures

Procedures. This study took a phenomenological approach to qualitative research. When describing this approach, Creswell writes (2007) “...a phenomenological study describes the meaning for several individuals of their lived experiences of a concept or a phenomenon” (p. 57). In addition to the inclusion of a phenomenological approach, the study incorporated the use of purposeful sampling in an attempt to better understand the experiences of AWS regarding communication with friends and family. Creswell (2007) reports that purposeful sampling is a concept observed in qualitative studies and “...that the inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study” (p. 125). In order to be eligible for the study, participants were required to meet three criteria, which consisted of a) being identified as a person who stutters, b) being between the ages of 12 and 17, c) and to have had some experience with speech therapy for their stuttering.

It should be noted that participants in the current study were taking part in a larger study which consisted of examining the level of open and problematic communication with their parents and how they discuss their stuttering with them. As part of the larger study, participants were asked to complete a demographic questionnaire and surveys reporting their level of communication with parents and took part in a semi-structured interview. For the purposes of this study, data gathered from one open-ended question was used and reported. This question was as follows: “How do you talk about your stuttering with other people [other than parents]?” When necessary, follow-up prompts were asked in regard to extended family, siblings, and friends. Only responses to the demographic questionnaire and questions in regard to experiences discussing stuttering with extended family, siblings, and friends were used for analysis.

Recruitment. Participants were recruited from a variety of sources that included speech-language pathologists and Board Recognized Specialists in Fluency Disorders. These individuals were initially contacted over email or phone and asked to help identify parents of AWS who fit the above requirements. Speech-language pathologists (SLPs) and Board-Recognized Specialists in Fluency Disorders then provided information about the study to parents of potential participants. If parents were interested in allowing their child to participate, they were asked to contact the primary researcher, or have the individual who approached them about the study contact the primary researcher on their behalf to schedule a time to meet and review the parental consent document.

Once parents of potential participants expressed interest in allowing their child to participate, the primary researcher contacted parents either by phone or e-mail to schedule a time to meet in person and review the consent document. After parents provided their written consent, which allowed their child to participate, the primary researcher reviewed the assent document with potential participants in person. If participants were willing to participate and had no further questions, they provided their written assent.
When parents and participants provided their written consent and assent, the study began with the primary researcher and participant going to a private location. During this time, the primary researcher distributed the questionnaires and was available to answer any questions. A total of 10 participants were recruited for the study and consisted of 8 males and 2 females with a mean age of 14 years. Please see Table 1 for a description of the participants. In order to assure confidentiality, participants were provided with a pseudonym.

Data Analysis
The data analysis procedures described in the following sections were conducted on not only this data, but for data that was part of a larger study on how adolescents communicated with their parents in general as well as about stuttering (Hughes, 2011). Participant interviews were analyzed using a process described by Creswell (2003) which consisted of the following:

1) All interviews were audio recorded and transcribed verbatim.
2) Once the interviews were transcribed verbatim, the entire transcripts were read through completely. This initial reading allowed the primary researcher to get a sense of the data and begin to generate thoughts and impressions of the data. These general thoughts were recorded in the margin of the transcripts and in field notes accumulated throughout the data collection process.
3) Once general thoughts regarding the transcripts were recorded, the primary researcher read through each transcript and assigned a code that described each statement made by the participant.
4) These codes were then grouped into major themes. A major theme consisted of an experience that was shared amongst the majority of participants and was collectively shared and observed in the narratives of participants.

Credibility. This study used procedures outlined by Creswell (2003; 2007) to assure the qualitative findings were credible. One technique that was implemented was increasing awareness of potential biases. At the time of the study, the primary researcher was a speech-language pathologist and a person who stutters. In order to become aware of potential biases related to his experiences as a person who stutters, the primary researcher was interviewed using the semi-structured interview protocol and was asked to respond to questions retrospectively in regard to the time period being explored (ages of 12 to 17). Once the interview was completed, the primary researcher transcribed his interview and conducted a thematic analysis on his own transcript. Finally, the primary researcher reported and discussed the findings of his thematic analysis with one other researcher involved in the study. During these discussions the primary researcher made notes regarding his experiences to assist in safeguarding against potential biases when analyzing participants’ transcripts.

Another technique used to assure the findings were credible consisted of a procedure in qualitative research known as member checking, which refers to the process of checking research interpretations of the data with participants (Creswell, 2003). The primary researcher checked his interpretations of the narratives at periodic times during the interviews with each participant. Also, at the conclusion of each interview, the primary researcher provided a general summary of participants’ narratives and requested clarification from participants regarding his interpretations. This general summary was completed with nine out of the ten participants.

Reliability. In order to assure the consistency in the interpretation of the qualitative data, the primary researcher incorporated two other researchers into the analysis process of the qualitative data. These two researchers assisted in the procedures for inter-judge reliability. The second researcher was an associate professor with experience in the area of stuttering and qualitative research. This researcher was provided with participants’ transcripts and progressed through the step-by-step analysis process along with the primary researcher. Once both researchers coded and analyzed the interviews, they met and shared their perceptions regarding the interviews and reached a consensus regarding the thematic structure. After a consensus was reached, a third independent researcher was incorporated to provide his perceptions regarding the thematic structure of participants’ interviews. Similar to the second researcher, this individual was an assistant professor in the area of stuttering and had experience with qualitative research.
Table 1
Demographics

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Severity</th>
<th>Therapy Location</th>
<th>I like the speech therapy I received</th>
<th>The speech therapy I received was helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 &quot;Brad&quot;</td>
<td>17</td>
<td>Male</td>
<td>Caucasian</td>
<td>Moderate</td>
<td>Both in school and out of school</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>#2 “Amy”</td>
<td>12</td>
<td>Female</td>
<td>Caucasian</td>
<td>Mild</td>
<td>Both in school and out of school</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>#3 “Jack”</td>
<td>12</td>
<td>Male</td>
<td>African American</td>
<td>Moderate</td>
<td>Both in school and out of school</td>
<td>Strongly Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>#4 “Leo”</td>
<td>12</td>
<td>Male</td>
<td>Hispanic/Latino</td>
<td>Moderate</td>
<td>Both in school and out of school</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>#5 “Bill”</td>
<td>13</td>
<td>Male</td>
<td>Caucasian</td>
<td>Moderate</td>
<td>Outside of school</td>
<td>Agree</td>
<td>Neither Disagree or Agree</td>
</tr>
<tr>
<td>#6 “Arthur”</td>
<td>17</td>
<td>Male</td>
<td>Caucasian</td>
<td>Severe</td>
<td>Outside of school</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>#7 “Jim”</td>
<td>14</td>
<td>Male</td>
<td>Caucasian</td>
<td>Moderate</td>
<td>Outside of school</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>#8 “Molly”</td>
<td>15</td>
<td>Female</td>
<td>Caucasian</td>
<td>Moderate</td>
<td>Outside of school</td>
<td>Strongly Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>#9 “Drew”</td>
<td>12</td>
<td>Male</td>
<td>Caucasian</td>
<td>Mild</td>
<td>Both in school and out of school</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>#10 “Tyler”</td>
<td>16</td>
<td>Male</td>
<td>Caucasian</td>
<td>Mild</td>
<td>Outside of school</td>
<td>Strongly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

Both the second and third researchers were provided with statements that comprised all themes represented in participants’ interviews. The primary researcher coded participant statement on two separate occasions to assure intra-rater reliability. Each of the researchers coded participants’ quotes for thematic structure. Pearson correlations were performed between the primary researcher first coding of statements with both researchers (as well the primary researcher’s second coding) to determine if a significant positive correlation exists for responses.

In addition, a Sander’s measure of agreement (Sanders, 1961) was performed to determine the level of agreement between all researchers. The Sander’s agreement score yielded >90% agreement amongst all researchers regarding minor and major theme structure. In addition, with the exception of one correlation (Primary researcher compared to third researcher regarding major themes $r = 0.897$), all correlations were >0.9 significance. It should be noted that this data was part of a larger study on adolescent who stutter and their communication with their parents. The data in this current study, as well as the reliability data below, is part of the larger data set by Hughes (2011).

RESULTS

Three major themes emerged from participant interviews related to how they discussed their stuttering with friends, siblings, and family members. The thematic structure for participants is illustrated in Table 3. The first major theme was “Stuttering is not directly talked about with friends” and consisted of participants rarely discussing stuttering in a direct manner with friends. Major Theme 2, “Stuttering is rarely discussed with siblings”, revealed that similar to friends, participants seldom discussed their stuttering with brothers and sisters. The third and final major theme was “Participants shared experiences with other family members who stutter” and described how participants discussed general experiences related to their stuttering with family members who also stuttered. These three major themes will be further discussed with accompanying quotes from participants in the section below.
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**Table 2**  
Sander’s Agreement Scores and Correlations between Researchers

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Sander’s Agreement Score</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Researcher (Intra-rater reliability)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Themes</td>
<td>100%</td>
<td>1.000</td>
</tr>
<tr>
<td>Minor Themes</td>
<td>100%</td>
<td>1.000</td>
</tr>
<tr>
<td>Primary Researcher/Second Researcher (Intra-rater reliability)</td>
<td>98.14%</td>
<td>0.993</td>
</tr>
<tr>
<td>Major Themes</td>
<td>100%</td>
<td>1.000</td>
</tr>
<tr>
<td>Minor Themes</td>
<td>100%</td>
<td>1.000</td>
</tr>
<tr>
<td>Primary Researcher/Second Researcher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Themes</td>
<td>90.74%</td>
<td>0.897</td>
</tr>
<tr>
<td>Minor Themes</td>
<td>96.29%</td>
<td>0.925</td>
</tr>
<tr>
<td>Second Researcher/Third Researcher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Themes</td>
<td>90.74%</td>
<td>0.929</td>
</tr>
<tr>
<td>Minor Themes</td>
<td>96.29%</td>
<td>0.925</td>
</tr>
</tbody>
</table>

**Table 3**  
Illustration of Thematic Structure

“How do you talk about your stuttering with other people [other than parents]?”

- **Major Theme 1 – Stuttering is not directly talked about with friends**
- **Major Theme 2 – Stuttering is rarely discussed with siblings**
- **Major Theme 3 – Participants shared experiences with other family members who stutter**

**Major Theme 1 – Stuttering is not directly talked about with friends**

Eight participants reported that stuttering was not openly talked about with friends. Some participants did not feel the need to discuss their stuttering with friends because their friends already knew they stuttered. In addition, friends just simply knew that the participant stuttered, or as Amy put it, “…they just figure it out that I stuttered.” If stuttering or speech therapy were discussed with friends, it was usually brief in nature and was assumed that friends already knew about the nature of the participant’s stuttering, or participants did not feel the need to directly address stuttering with friends. Some participants shared discussing speech therapy with friends during elementary school when going to speech therapy was perceived as different and “cool.” However, participants reported not having these discussions with friends at the time of this study. Molly described her experience with discussing stuttering with friends as not feeling the need to directly address her stuttering with them. She states, “…with my friends, like we just really don’t talk about it…they know that I have it [a stutter]... like I never said, ‘hi...I have a stutter’...we never like addressed it, they just... know that I have one.” Despite the large majority of participants who did not directly talk about stuttering with friends, there was one participant who shared that he discussed his stuttering frequently with his friends. Arthur indicated that he knew his friends for a long time and described his group of friends as supportive.
Arthur explained how he talks with his friends about his speech by saying:

*I talk about my stuttering with like all my...good friends... I’ve known all my good friends for like almost my whole life I mean...they’re really understanding and like accepting of who I am though and they have no problem that I stutter.*

**Major Theme 2 – Stuttering is rarely discussed with siblings**

Similar to conversations with friends, there were six participants that did not frequently discuss stuttering or speech therapy with their brothers or sisters. Many of the reports regarding siblings were comparable to friends, with participants indicating that siblings already knew about their stuttering. Some participants believed that siblings would not be interested in talking about stuttering with them. Jack reported this belief when describing his experience talking about his stuttering with his brother and sister. He stated “*My sister doesn’t really listen to most things. She just listens to the things she likes... I don’t really talk to my brother about speech therapy, he just mainly stays downstairs...*” One participant deviated from this theme by reporting that he discussed his speech therapy with his brothers. In these discussions, Jim shared that his brothers appeared to initiate the discussion by asking questions about speech therapy. These conversations appeared to be about what was done in his speech therapy sessions and who he was talking with.

Jim explains his experience talking about his stuttering with his brothers as:

*I have talked a little bit with my brothers, but just a little bit...they would usually like ask me about who... [my speech therapist] is cause they really don’t know who he is and what he has taught me, so I usually tell them about that.*

**Major Theme 3 – Participants shared experiences with other family members who stutter**

There were four participants who reported having a family member that also stuttered. As a group, participants reported a variety of family members who stuttered that consisted of a sister, brother, mother, father (unconfirmed), cousin, aunt, and grandmother. Most of the participants reported talking with this family member regarding strategies they use to manage their stuttering and their shared experiences with stuttering. For example, Jim describes his experience talking with his aunt who stutters and how this conversation was facilitated by a movie about stuttering called “The King’s Speech.” Jim goes on to say:

*I have [talked] with one [person about stuttering] for like a little bit ... it first started...on the subject of the King’s Speech, the movie...and...we talked about the techniques that he used...and that some of those are what I use in my speech.*

Of the participants who reported having another family member who stuttered, there were two participants who indicated they did not discuss stuttering with this family member. One of these participants was Molly, who believed that her father demonstrated stuttering behaviors; however she was uncertain if he actually stuttered. For Molly, she reported not discussing speech therapy or stuttering with her father, as she previously shared that her mother was more of the person she talked with about her speech. In addition, Drew thought that his sister stuttered, yet he believed she would not be receptive to discussing stuttering, as he reported “*If I did [talk about stuttering], she might leave or sleep because she doesn’t care.*”

**Discussion**

As a group, participants did not openly discuss stuttering and speech therapy with friends or peers, however they indicated that friends knew that they stuttered and, to a certain extent, knew about them going to speech therapy. These findings support a trend that has been noted in previous studies of AWS. For example, Blood et al. (2003) also found that many AWS reported that friends knew about their stuttering and the most common way in which AWS reported that people find out about stuttering suggested an indirect method of disclosure, being that stuttering occurs and others notice it. This indirect way of others finding out about stuttering is consistent with the qualitative reports from participants, as they indicated that stuttering is not directly addressed with friends because friends “just know” that participants stutter. Hearne et al. (2008) found comparable results in regard to how AWS do not discuss stuttering or speech therapy openly with friends. In their study, Hearne et al. found that AWS did not discuss stuttering or their feelings about stuttering with friends. In the current study, participants as a group reported at one point discussing speech therapy when they were younger with friends;
however, these discussions appeared to decrease when they got older.

Similar to discussions with friends, stuttering was not directly discussed with siblings. If stuttering was discussed, it was very brief and consisted of basic information about speech therapy and stuttering. Very little research has reported how AWS, let alone people who stutter, communicate about stuttering with their siblings. Previous research exists that describes the experiences of siblings of a person with a disability. Seligman and Darling (2008) write that siblings of a person with a disability may demonstrate uncertainty about how to discuss the disability with their sibling because of a lack of understanding about their sibling’s condition.

This may have been the case for the siblings of participants in this study. The lack of communication about stuttering and speech therapy with siblings may have contributed to a lack of awareness from the point of view of the sibling in how to discuss stuttering. Four participants reported that other family members stuttered. Both of the female participants, Amy and Molly, indicated their parents at one point stuttered, although in Molly’s case she was uncertain if her parent actually stuttered.

Little is known about how family members who stutter talk about their stuttering. Despite the lack of studies in this area, it is well documented that stuttering runs in families (Bennett, 2006; Guitar, 2006) and a family history with stuttering has been reported in about half of all individuals who stutter (Yairi & Ambrose, 2005). This was true for this group, as 4 out of the 10 participants reported having a family member who stuttered, or had a family member who had stuttered at some point in their life. All participants reported talking with these family members about stuttering, however these conversations tended to revolve around general experiences and management of stuttering and were not specifically about emotional or social aspects related to stuttering.

Since participants were reporting their perceptions of how they communicate with others, the development of social cognition during adolescence is particularly relevant when discussing these findings. The perceptions adolescents have of others as well as themselves changes over time during this developmental time period. For instance, two participants, Bill and Tyler, perceived themselves differently when they were in the social context of their friends. For Bill, he felt differently around his friends and did not stutter around them. When asked if he talked with his friends about stuttering, Bill said “Not really, it’s like the same thing I don’t stutter around them or anything so... talking to friends and stuff isn’t that hard. It’s not hard. I just talk normally.” Bill may have had a different self-perception around his friends, one where stuttering was not occurring. Tyler had a similar experience with discussing stuttering with his friends. He described his experience as the following:

“I’d say if I’m around my friends I’m usually on my, I don’t know how to describe it, my mode, but it’s like, I like don’t really have any problems when I talk to em’, so it’s almost like I can talk fluently, easily with them like I’m relaxed with them...”

**Limitations**

The current findings should be interpreted with some caution. First, as with the nature of qualitative research, the sample size was relatively small and is unable to be generalized to a larger population of AWS. Secondly, it should be noted that the majority of participants could be classified as younger adolescents, with four out of the ten participants being 12 years of age. Because the majority of participants were younger AWS, the responses may have been biased to the perspectives of younger adolescents who stutter and may have not been representative of how older AWS may communicate about stuttering with friends and family.

**Clinical Implications**

The current finding can be helpful to clinicians who work with AWS. First, these findings can help make clinicians more aware of how AWS may communicate in their social context, as these participants did not discuss their stuttering openly with friends or siblings, however did discuss some topics related to stuttering with family members who stuttered. Secondly, by understanding the broader social contexts of the life of AWS, clinicians can more accurately include others, if appropriate, such as friends and family members into the therapy process for AWS. Finally, the current findings may affect how clinicians plan to discuss disclosure strategies with AWS and contribute to the rationale for why some AWS do not discuss stuttering openly with siblings and friends.◆
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Stuttering Treatment: The Role of Acceptance in the Process of Change

Diane Games

Abstract
The purpose of this article is to discuss client acceptance of stuttering and the relationship of this acceptance to the process of behavioral and attitudinal outcomes in treatment. Potential outcomes of client acceptance of stuttering include improved willingness to communicate and openly discuss stuttering. Case studies are used to demonstrate various aspects of client acceptance.

Learning Objectives
(1) The reader will identify the importance of acceptance in stuttering therapy
(2) The reader will demonstrate an understanding of the process of change
(3) The reader will apply key terms in the process of change and acceptance to case examples

Defining the role of client acceptance in “successful” treatment of stuttering is a conundrum. Bloodstein and Ratner (2008, 380-384) analyzed the effectiveness of various treatment approaches and concluded that many methods are effective for some time. The authors indicated that the nature of recovery is a “pathway” or a “process that is not understood” (p.388). Conture and Curlee (2007, p.225-226) also address the concepts of acceptance and openness in treatment tasks. These include confronting avoidance behaviors, discussing the client’s expectations for fluency and social skills training during treatment. It appears that most treatment outcomes include improvement in communication skills, confidence when speaking, and a reduction in stuttering severity. However, the role of acceptance continues to be an area for further discussion in the treatment of stuttering.

I had an opportunity to discuss the concept of acceptance as it relates to stuttering with Lee Reeves, a friend, past Chairman of the Board of the National Stuttering Association, and a person who stutters. Lee wrote the following about acceptance in 2012 (printed with the author’s permission).

“Acceptance is an often discussed concept by those affected by stuttering. Because it is a very personal concept discussions can bring out very strong emotions and opinions. Some have argued that accepting one’s stuttering is tantamount to giving up and thus deciding to remain locked in a world of fear and limited opportunity. Others suggest that acceptance means that it’s not only OK to stutter but also that stuttering could and indeed should be worn (or spoken) like a badge of honor. Still others believe that acceptance is a necessary step for change to occur. Through my own journey with stuttering I have come to believe that acceptance is reaching a state of mind in which we acknowledge both externally AND internally that our inability to speak with the spontaneity and fluidity of others is real but is not our or anyone else’s fault; that while stuttering is part of who we are it does not define us. The concept of acceptance does not mean that we are destined to remain at or even be satisfied with the condition in which we find ourselves. It does mean, however, that we have attained a position to make clear decisions on our own behalf without the baggage of the past holding us back or the blind optimism of the future jading our expectations. The decision to change the way we speak requires personal risk and will be met with both success and failure. However, with a foundation of acceptance, success is more sustainable and failure is less destructive. Simply put, we cannot change the way we speak for any appreciable time until we become comfortable with the idea that we are more than our stuttering and that we alone have the power to determine what to do about it. Accepting stuttering does not mean giving up. It is not the end but rather, the beginning!” (L. Reeves).
Acceptance in Treatment of Stuttering

Clinical approaches to the treatment of stuttering typically target carryover of skills into a variety of speaking situations and may view success in a holistic manner by addressing strategies for fluency, modifying attitudes and working on transfer into a number of situations (Bloom and Cooperman, 1999). Many clients experiment with a number of treatment approaches and finish treatment with successful outcomes. However, some clients maintain acceptable fluency and others regress. The clinical question becomes one of how important is acceptance of stuttering to the process of change? Reeves would argue that it is essential.

In further examining this issue, the Social-Communication Model (Conture, et.al, 2007; Ratner and Tetnowski, 2007) examines the complexity of stuttering. In this model, it is hypothesized that each individual has unique patterns of disfluency, attitudes about stuttering, and various situational challenges. In addition, each individual deals with internal factors that impact change including issues of self-regulation and/or emotional reactivity to fluctuating fluency levels. The clinical question then becomes one of evaluating a client’s status in each of these areas and determining how and when to address these issues in treatment.

From a clinical perspective, client acceptance of stuttering often leads to growth in a number of areas including changes in fluency, improved attitudes about speaking and perception about oneself as a communicator. In the words of David Luterman (Presentation Handout, NSA: 2012), “empowering each client with the potential for change may include reducing stuttering, but also focuses on the value of becoming an improved communicator. Despite dealing with stuttering for years, some clients find this acceptance as self-liberating. Others cling to the fact that eliminating stuttering is the ultimate desired outcome”.

Acceptance and the Process of Change

The clinical question remains, how does a client’s acceptance or lack of acceptance impact treatment. Change in a multidimensional disorder such as stuttering is often considered “a non-linear process” (Prochaska, Norcross, and Diclemente, 2006). As a process, the client becomes the “problem solver” in the clinical dynamic. The clinician assumes responsibility for facilitating activities and situations that move the client forward in the process. This places the clinician in the role of facilitating self-discovery and yet introducing new information about the disorder of stuttering in general and about the specifics of the individual’s stuttering pattern. In my experience, it is also critical to prepare the clients for the speed of change. Many have been stuttering for years, but still feel that change should occur more rapidly. At any point during treatment, change may slow or regress due, potentially, to fluctuations in the physical, emotional, and or attitudinal characteristics of the individual who stutters. In a treatment interaction, using a problem-solving framework to visually summarize the issues in a difficult speaking situation often facilitates a clearer analysis of the situation. These frameworks might include boxes for each speaker/listener in the situation, verbal and non-verbal responses from the listener, and questions about the outcomes. Potential follow up questions could include the following: Who were the listeners? Why do you think this speaking situation prompted more tension? Describe the outcome of the interaction. Did you say what you wanted to say? Implicit in this type of questioning is the creation of a client-based problem solving dynamic. The client thus becomes empowered to problem solve independently. Another factor in this problem solving dynamic is the client’s acceptance that most significant changes take time and effort. Potential follow up questions might include: 1) “Did you get your message across to the listener?” 2) “Did you say what you wanted to say?” 3) “How did the listener respond?”, and “What would you try to do next time if you could change one behavior?”.

Prochaska, Norcross, & Diclemente, (2006), write about the process and various stages of change. The stages include the Pre-Contemplation phase. The typical pattern of this phase is one of “living with the disorder” due to lack of awareness of alternatives. The next stage is the Contemplation Phase where coping behaviors develop to mask the distress. In stuttering, these might include avoidance or secondary mannerisms. For some, the stress becomes unbearable and the client recognizes that change is necessary. As the stress continues, the client often resorts to self-defeating and self-perpetuating behaviors or actions including negative thoughts that often reinforce unhappiness. It is at this point that a person enters the Action Phase. In this phase, the client learns to focus on positive individual traits: i.e. I am smart; I am a good listener,
etc. In addition, the client delineates between situations that result in positive thinking and those that prompt negativity. In this stage, the client begins to practice the new behaviors. The final stage is one of Maintenance. In this phase, there is ongoing prevention or practice of managing ordinary distress to prevent relapse. Thinking of acceptance as part of the process often helps both clinicians and clients from becoming discouraged in the early stages of treatment or during relapse.

The authors, Prochaska, Norcross, & Diclemente, (2006) continue to discuss the various techniques to facilitate change. These techniques include consciousness-raising; self knowledge, social liberation, emotional arousal, self-reevaluation, countering, and commitment. Stage 1 is consciousness-raising or increasing the level of client awareness, making information available, and helping the client make intelligent decisions. Stage 2 is self-knowledge or helping the client discover characteristics of his/her problem. Stage 3 is social liberation or finding alternatives that can give the client added motivation to sustain change such as support groups, meeting others who stutter, or watching videos of others speaking about his/her stuttering, Stage 4 is emotional arousal or helping the client become aware of defenses against change, also called “catharsis”, Stage 5 is self-reevaluation which includes a thoughtful & emotional self-appraisal of the problem that enables the client to see when and how problem behaviors conflict with personal values, such as the pros and cons of trying to overcome the problem, how do you perceive yourself with and without the problem?, what is the cost of change in time invested?, the energy required, pleasure, stress or image?, Stage 6 is Countering or substituting healthy responses for unhealthy ones. These strategies may include relaxation, desensitization, and assertion, and positive I-statements (I am a good listener; I have good ideas, etc.). The final Stage 7 is Commitment. In this stage, the client accepts responsibility for change, which is critical in the treatment process. The commitment phase is often self-liberating.

Case Studies
Three case summaries included below represent various stages of change. In addition, each client presented with different levels of acceptance of stuttering. While the names have been omitted, the situations and responses to change are representative of what occurred in treatment.

Adult Case Study
SW, an attorney in the county court system, was 54 years old at the initiation of treatment. S reported having significant difficulty with the daily task of giving instructions to jurors, and it was this concern that prompted S to seek treatment. S reported that family and friends accepted his stuttering as “the way I speak”. Evaluation results included high levels of stutter-like disfluencies in combination with concomitant behaviors of rapid rate of speech, head turning, and loss of eye contact during moments of stuttering. Goals for SW focused on learning stuttering modification and fluency shaping techniques to manage the timing and tension of his speech. Transfer of these techniques into speaking tasks in his job was a priority. The outcomes of treatment included rapid and steady improvement of fluency, not elimination of stuttering. SW embraced the opportunity to learn about his stuttering pattern and to apply strategies while communicating in his work environment. He focused on goals of improved fluency, modification of stuttering and applying techniques to speaking situations in his daily life. He also developed short-term goals for transfer that included selection of specific speaking situations and targeting specific behaviors to practice each week. SW initiated treatment in Stage 1, but he progressed to the point that he was able to modify or manage his speech with minimal support. Due to the length of time he had stuttered before seeking treatment, he stayed in treatment for approximately two years, although the frequency of treatment was gradually reduced. He returned for periodic re-checks for several months post dismissal and remained conscious of the need to commit to regular practice.

Junior High/High School Student
LM was in sixth grade when she initiated treatment for her stuttering. She attended individual and small group sessions until her junior year in high school. At that time formal sessions were discontinued. In the early stages of treatment, LM reported managing her stuttering by avoiding certain speaking situations, changing words a

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unfamiliar people once she started college. LM had also been experiencing some regression in monitoring her speech. Worksheets addressed two stages of change including self re-evaluation (by posing and answering questions about the challenging situations and her speech) and countering (substituting responses to these speaking challenges). Frameworks in the form of “situational problem solving” outlines were utilized to help LM describe the situation, list emotions/fears, and to analyze her response to each speaking situation. Responses, whether positive, negative, or neutral were listed for situations. Activities were followed with a problem-solving step. LM left treatment in the self re-evaluation stage of change. LM had accepted her stuttering on some levels, but she demonstrated difficulty with substituting new behaviors in new environments or when emotionally charged.

High School Student
VA started treatment for his stuttering as a freshman in high school. While he committed to an ongoing treatment and attended sessions until his senior year, VA maintained a goal of eliminating his stuttering. In speaking tasks during treatment, he often demonstrated frustration and anger when he stuttered. He reported that this also happened at school. In treatment, he worked on strategies of fluency shaping but struggled to accept modifications of his stuttering or to even practice any of the techniques. Despite discussing the process of change and relapse in treatment, VA became extremely distressed when he experienced a “set-back”. In one session, he left the room, slammed the door, and stomped to the back area of the office. While VA had made progress on some levels, his lack acceptance of stuttering appeared to interfere with the continued process of change. VA eventually stopped treatment to attend college. VA had a strong desire to achieve, but internal expectations were unrealistic. Stuttering did not fit into this “communication plan” or into his future goals. Therefore, it was easier to continue to change words/sounds than to manage fluency shaping/stuttering modification strategies when communicating. As can be expected, problems occurred in situations where substitutions were not possible. Where was VA in the process of change? Had he reached acceptance? When faced with disappointment or challenges, he blamed others instead of analyzing or attempting to solve the problem. VA needed to accept that stuttering was his personal journey and different from anything else he had attempted.

Final Thoughts
The acceptance of stuttering is an important variable in the treatment of stuttering. Some clients progress through the early stages of change but stall on the later steps of transfer. Most clients need support to maintain change before acceptance of stuttering becomes a reality. Facilitating change in behaviors, attitudes, and thinking of an individual who stutters is a complex process. Some clients work steadily through the process, but others abandon the process for a number of reasons. However, in my experience, a client’s acceptance of stuttering facilitates the process of change and fosters communication growth.

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Treatment Outcomes for a Nine-day Intensive Stuttering Therapy Program

Farzan Irani and Rodney Gabel

Abstract
The purpose of this pilot study is to evaluate the effectiveness of a nine-day variation of the Intensive Stuttering Clinic for Adolescents and Adults (ISCAA) offered at Bowling Green State University. The program maintained all components of the 15-day ISCAA including 75 hours of direct therapy. In addition to the intensive program, a six-month follow-up via telepractice was also included. This paper discusses the results of the nine-day program, the follow-up therapy, and a comparison with the original 15-day ISCAA. Limitations related to the intensive and follow-up program are discussed.

Learning Objectives
1. Summarize what we know about effectiveness of intensive stuttering therapy
2. Identify the importance of a non-intensive maintenance program to supplement intensive stuttering therapy
3. Describe strengths and limitations of the nine-day intensive program

Stuttering therapy has traditionally been offered either as an intensive clinic where clients receive approximately 75 hours of direct therapy over a span of three weeks, or a regular non-intensive therapy where clients receive therapy for one to two hours a week (St. Louis & Westbrook, 1987). In general, intensive stuttering therapy models have been reported to be effective and provide clients a positive therapy experience (Boberg & Kully, 1994; Kully, Langevin, & Lomheim, 2007; O’Brien, Packman, & Onslow, 2008, Irani, Gabel, Daniels, & Hughes, 2012). Intensive programs are often residential in nature, i.e. clients from different parts of the country live in the location where the program is offered. One reason these programs are important is that they offer an effective and positive therapy experience for individuals who do not have access to appropriate therapy available in the city or area where they live.

St. Louis and Westbrook (1987) reviewed stuttering treatment outcome studies published in major journals and books from 1980 to 1987 that applied treatment to three or more people who stutter (PWS) and included pre-treatment and post-treatment measures. The results indicated that a combination of the two therapy models, intensive therapy combined with a non-intensive maintenance program, might often be more effective than one model alone. They reported that intensive therapy models appear to be effective in helping PWS achieve fluency early in the process; however, problems with relapse arise when PWS are dismissed immediately following an intensive program. Qualitative data exploring client experiences in an intensive stuttering therapy program reported by Irani, et al. (2012) further corroborates this notion. A majority of the participants in the study indicated a need for non-intensive follow-up therapy after dismissal from therapy. Thus, non-intensive maintenance programs help clients generalize the gains made during the intensive program to their everyday lives.

A review of the literature indicates that mixed therapy models have not been examined extensively to determine their effectiveness. Thus, it is extremely important to study the benefits of a mixed therapy delivery model (intensive program combined with a non-intensive maintenance program), primarily due to the lack of research exploring feasibility issues with follow-up after the intensive portion of therapy and lack of published treatment effectiveness studies documenting benefits from therapy in the field of
stuttering. This is especially true for programs that use stuttering modification techniques and cognitive behavioral therapy (Onslow, 2003).

In the past, the Intensive Stuttering Clinic for Adolescents and Adults (ISCAA; see Gabel, Irani, Palasik, Swartz, & Hughes, 2010) has been offered as a three-week intensive stuttering therapy program at Bowling Green State University from 2003-2010. A telepractice maintenance program was added to the ISCAA in 2008, following requests from clients. This model has been reported to demonstrate positive outcomes (see Irani & Gabel, 2011) based on pilot data. Additionally, Irani et al. (2012) utilized a mixed methods approach to evaluating long-term effectiveness of the three-week variant of the ISCAA. The results indicated that all clients made positive changes and were able to maintain changes over a period of one to seven years. A primary qualitative theme reported in the study was the need for a non-intensive maintenance program. A majority of the clients interviewed by Irani et al. (2012) indicated that they felt they would have benefitted from a maintenance program immediately following the ISCAA.

The current paper presents treatment outcomes data for a nine-day variation of the ISCAA with a six-month (non-intensive) telepractice follow-up. The nine-day variation of the program was offered due to informal observations and reports from prospective clients who were unable to commit the entire three weeks to attend the original fifteen-day ISCAA. A primary objective of the ISCAA was to increase accessibility to stuttering therapy, hence the program was offered as a nine-day intensive clinic to increase accessibility for many prospective clients, and determine the effectiveness of this model of intensive therapy that has not been explored before. The first purpose of this paper is to determine overall effectiveness of this aforementioned variation of the ISCAA to help determine the effect of reducing the length of the program on treatment effectiveness. Further, the study will also discuss how these results compare with those reported by Irani et al. (2012) where the original ISCAA was evaluated. Finally, the paper will provide a discussion of limitations of this model, directions for future research, and clinical implications.

Methods

Treatment Program

The program evaluated is a nine-day variant of the ISCAA. The intensive portion of the program offered a total of 75 hours of direct contact time over a period of nine days. Thus, the quantity of direct therapy offered during the intensive clinic was maintained despite the reduction in the number of days. Typically, the program offered 75 hours of therapy over a period of 15 days. Several areas were addressed during the 75 hours: (1) educating the client about stuttering, (2) focusing on attitude change (cognitive restructuring), (3) modifying stuttering, and (4) increasing fluency (see Gabel et al., 2010 for a comprehensive review of the ISCAA).

The follow-up program was conducted via video telepractice and lasted 6 months. The goal of the follow-up program was transfer and maintenance of gains made during the intensive portion of the clinic. Approaches used during the follow-up portion remained the same as those used for the intensive portion. The structure of the follow-up sessions was two therapy sessions a week for one hour each.

Participants

Participants in this study included six adult males ranging in age from 20 years to 36 years. All participants signed a consent form approved by the Institutional Review Board. One of the six participants had attended the ISCAA previously. The remaining five clients were attending the program for the first time and had not received therapy for at least six months prior to attending the ISCAA. The other five participants, however, had received therapy services for their stuttering in the past. One of the participants had also attended an intensive clinic that focused primarily on speech restructuring techniques in the past.

Outcome Measures

Outcome data related to stuttering severity and behavioral changes were measured. Measures of speech behavioral outcomes included: percentage of syllables stuttered (%SS) during phone calls, reading, monologue, and conversation in the clinic; and the Stuttering Severity Instrument - Fourth Edition (SSI-4) developed by Riley (2009). These measures were administered before beginning the intensive clinic (pre-intensive), at the end of the intensive clinic (post-intensive), and at the end of the 6-month follow-up program (6-month follow-up).
Outcome data related to attitudes toward communication and the impact of stuttering on the individual’s life were measured at the beginning of the intensive program (pre-therapy) and at the conclusion of the follow-up program (post-therapy). These measures included the Erickson S-24 Scale of Communication Attitudes (S-24) (Andrews & Cutler, 1974) and the Overall Assessment of the Speaker’s Experience of Stuttering (OASES) developed by Yaruss and Quesal (2008). These measures were administered before beginning the intensive program (pre-intensive) and at the end of the telepractice follow-up (6-month follow-up). The attitude scales were not administered at the end of the intensive program due to the short duration of the program (nine days).

Data Analysis
Descriptive statistics for all data were completed. This included calculating the mean across participants for individual measures of stuttering severity and attitudes toward communication. In addition to the descriptive statistics, treatment effect was measured and reported using Cohen’s d (Cohen, 1988), a frequently used measure of effect size. A freely distributed program developed at the Center for Neuropsychology at Swinburne University in Australia (Devilly, 2004) was used to calculate effect sizes. Effect sizes were calculated only for measures of stuttering severity (%SS and SSI-4) comparing pre-therapy data with post-intensive clinic and at the completion of the maintenance program (6-month follow-up). Only three of six participants returned the completed attitudes questionnaires (OASES and S-24) after completion of the program, hence effect sizes were not reported due to the small sample size (n=3).

Results
Stuttering Severity
Pre-intensive and post-intensive data was available for all six participants. However, severity data collected at the end of the 6-month follow-up program was available for four of the six participants. All percent of syllables stuttered (%SS) data was averaged across participants and presented in Figure 1. Results from the descriptive statistics indicate that participants demonstrated a substantial reduction in %SS on an average for all speaking situations. The descriptive data was further analyzed to determine treatment effect using Cohen’s d (Cohen, 1988; Devilly, 2004) indicating a medium effect (Cohen’s d=0.56). Further, these changes were maintained at the end of the 6-month follow-up program with a medium effect size (Cohen’s d=0.52).

Scores on the SSI-4 were also found to decrease substantially following the intensive portion and were maintained at the end of the 6-month follow-up. Scores for the SSI-4 also decreased following the intensive program with a strong effect (pre-intensive = 25; post-intensive = 16.3; Cohen’s d = 1.1) and were maintained at the end of the follow-up program with a medium effect (SSI-4 Score = 19.5; Cohen’s d = 0.68). SSI-4 and S-24 scores for individual participants are presented in Table 1 below.

Table 1. SSI-4 and S-24 Scores for Participants Attending ISCAA

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Pre-intensive</th>
<th>Post-intensive</th>
<th>6-month follow-up</th>
<th>Pre-intensive</th>
<th>6-month follow-up</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>6</td>
<td>28</td>
<td>15</td>
<td>N/A*</td>
<td>23</td>
<td>N/A*</td>
</tr>
</tbody>
</table>

*Data was unavailable.
Communication Attitudes
Outcome measures related to communication attitudes were measured using the S-24 scale of communication attitudes and the OASES. Both scales were administered prior to beginning the ISCAA intensive program and then re-administered at the end of the six-month follow-up program. Only three participants completed and returned the OASES and S-24 scales at the end of the therapy program. Thus, only descriptive data will be provided for the changes observed on the scale. On average, the score on the S-24 decreased slightly at the conclusion of therapy (pre-therapy score = 15.33; post-therapy score = 12.33) (See Table 1). Similarly, the average score across three participants on the OASES decreased slightly (pre-therapy score = 2.82; post-therapy score = 2.74). This change in impact scores did not yield a change in the overall impact rating, which remained at “moderate.” Scores for individual sections of OASES are presented in Figure 2 below.

![Figure 2. Average Impact Score For Individual Sections on the OASES Across 3 Participants.](image)

Discussion
The current study reports preliminary data evaluating the effectiveness of a nine-day variant of the ISCAA combined with a six-month non-intensive telepractice follow-up program with respect to changes in stuttering severity and communication attitudes. The nine-day clinic was provided as an alternative to the regular 15-day ISCAA (Gabel et al., 2010) to accommodate client needs expressed over a number of years. In order to maintain the integrity of the original ISCAA program, this shorter version also offered 75 hours of direct therapy over a period of nine days. The discussion will focus on the preliminary results obtained from 6 participants who attended the program and compare this data with previously published data on the regular 15-day ISCAA (Irani et al., 2012). Further, this section will focus on the benefits and limitations of this program followed by a discussion of future directions and clinical implications.

The results of this program indicate that the nine-day intensive program did result in a clinically measureable reduction in stuttering severity. Based on the change measured in %SS and SSI-4 scores across six participants, it appears that all participants demonstrated a reduction in stuttering severity corresponding to a medium (for %SS) to strong (for SSI-4) effect size. Further, these changes were maintained at the conclusion of the telepractice follow-up program with a medium effect size.

Measures of communication attitude indicate that clients reported a mild positive change in communicative attitudes as measured by the S-24; however, no changes in impact ratings were reported on the OASES. It is important to note that only three of the six participants completed and returned the scales.

A comparison of these results with results reported in Irani et al. (2012) indicates there are some noticeable differences. Irani et al. (2012) conducted a retrospective analysis of data obtained from the ISCAA between 2003 and 2009. The study included seven participants who volunteered to complete the interview and all scales at the time of the study. Results from Irani et al. (2012) indicate a strong effect size on all measures of stuttering severity that was maintained for at least one-year post therapy. The results also indicate a clinically relevant change in measures of attitude change including the S-24 and the OASES. In comparison, results from this study did not demonstrate positive changes in attitude measures.

This difference in quantitative measures between the two clinics could be attributed to multiple factors, including the change in the structure of the program itself and differences in the methodology between the two studies.

The first point worthy of discussion here is the difference in methodology between the current study and Irani et al. (2012). The current study included all participants who provided consent to use their data for
research purposes. The study by Irani et al. (2012) actively recruited clients who had completed the ISCAA in the past. Only clients who agreed to participate in the study and complete an interview were recruited; hence, the participants for that study could present a potential bias (Irani et al., 2012). However, based on the limitations of both studies (to be discussed below), one cannot establish a direct cause-effect relationship.

A second point worthy of this discussion is the difference between the two versions of the ISCAA compared. The original ISCAA offered 75 hours of direct therapy over a period of 15 days. The current study reports on a variant that provided the same 75 hours of therapy over a nine-day period. This change in structure, while reducing the number of days resulted in an increase in the number of hours that therapy was conducted during the day. Anecdotal data from both clinicians and clients indicate increased fatigue as a result of the extended hours of therapy each day. This increase in fatigue could have potentially impacted the benefit from therapy, especially toward the end of the intensive clinic. Unfortunately, there is no method to ascertain the impact the longer hours of therapy each day had on treatment effectiveness directly. One could design a qualitative study to determine the same; however, qualitative data was not collected at the time of this study.

Limitations and Future Directions
A primary limitation with the current study is the small sample size (n=6 for stuttering severity data and n=3 for attitudinal data). The small sample size does not permit the generalization of data or direct comparison of the data with previous studies exploring treatment effectiveness. It should be noted that the nature of the follow-up program could have potentially contributed to the small sample size. The S-24 and OASES were mailed to the clients to complete and send back; however, only three clients mailed the completed questionnaires back after repeated reminders. All participant data was available prior to beginning the intensive clinic because participants were requested to complete the questionnaires in the clinic before beginning therapy. In the case of telepractice, when clients are not physically present in the clinic, they often forget to complete and return the surveys.

A second limitation is that reliability for the clinical data (%SS) was not established. Thus the small sample size combined with the lack of reliability for clinical data require that all results be interpreted with caution. This was a preliminary study, thus this analysis was not completed. Future studies of this program will include measures to assure reliability of therapeutic measures.

Future studies could consider adding a qualitative component to determine what aspects of therapy were helpful from the client perspective. For example, qualitative data obtained from both clients and clinicians would help determine the presence of fatigue as a result of the clinic format, as well as its role (if any) in treatment outcomes. This can be further addressed by doing a comparative study that directly compares the results between participants receiving both versions of the ISCAA, provided by the same clinicians. A study of that nature, with both groups (nine-day and 15-day) balanced for age, gender, and stuttering severity, would help determine differences present, if any.

Clinical Implications
The results of this current study indicate that while clients did benefit from this variation of the ISCAA in terms of stuttering severity, the results, especially in terms of attitude change, appear to be more robust for the 15-day variation of the program. It is important to further explore the impact of the intensity of an intensive program of treatment outcomes. As reported in Irani et al. (2012), follow-up therapy is important for an intensive program and should be maintained in the future; however, the shortened duration of the program with no reduction in the number of hours of therapy might not be optimal. Based on the current results, reducing the total number of hours of therapy offered over a shortened intensive program, combined with a non-intensive maintenance program might be a good solution; however, it would require a pilot study to establish treatment effectiveness. ◆
References


Recovery from Stuttering: An Application of Pentadic Analysis to Narratives of People Who Stutter

Matthew T. Althouse, Rodney M. Gabel, and Charlie Hughes

Abstract
Stuttering is a neurophysiological disorder that has broad consequences for one's well being, including emotional and attitudinal aspects. Because of culturally-motivated shame associated with disfluency, people who stutter (PWS) are at risk for suffering social phobias, elevated levels of stress and anxiety, and mental-health issues. Using Jerome S. Bruner's modification of Kenneth Burke's pentad, the present study investigates how “recovered” PWS successfully deal with their negative emotions and attitudes. Specifically, it suggests that an integral part of recovery involves the management of what Bruner calls “Trouble” and what Burke calls “guilt.” The study’s conclusions have noteworthy implications for continued study of recovery and for treatments of PWS.

The article author(s), Matthew T. Althouse, who works for The College of Brockport: State University of New York, Rodney Gabel who works for the University of Toledo, and Charlie Hughes who works for Eastern Kentucky University have no relevant financial or nonfinancial relationship to disclose.

Learning Objectives
(1) identify basic aspects of recovery  
(2) describe the key features of the process of recovery  
(3) identify the ways in which Pentadic analysis can be used to understand the process of recovery from stuttering

Stuttering is a complex communication disorder with no known cure. Although an exact cause of stuttering has yet to be identified, research suggests that it stems from an interaction of genetic, neurological, and socio-emotional factors (Guitar, 2006; Yairi & Seery, 2011). A classic discussion authored by Wingate (1964) identified several major parameters of stuttering, including neurophysiological dysfunction leading to speech disfluencies like prolongations of sounds, repetitions of sounds, and blockages of speech, as well as behavioral reactions to these speech characteristics. Further, Wingate initiated a discussion about emotional reactions and the sense of a loss of control of the speech mechanism associated with stuttering. Since Wingate’s study, scholars in speech and language
The present study looks beyond overt speech characteristics of stuttering to investigate how “recovered” people who stutter (PWS) cope with their negative emotions and attitudes. Specifically, we suggest that an integral part of recovery involves management of what Jerome S. Bruner calls “Trouble” and Kenneth Burke calls “guilt.” Both concepts draw attention to how culturally generated meanings and expectations may affect motives of PWS. Consider, for example, how social rules for orations in business meetings generally require fluency. When an individual experiences oscillations and blocks during a presentation, he or she may be performing to the best of his or her abilities but breaches norms, nevertheless. How does a person who stutters redress such violations to minimize feelings that cause immediate embarrassment and long-term harm to self-concept? This is our study’s central question. To address it, we review literature that explains the emotional influences of stuttering on PWS and scholarly efforts to understand how PWS cope with relevant emotional issues. We introduce Bruner’s modification of Burke’s pentad as a means to chart motives in narratives of PWS in recovery. Then, we apply the pentad to orations delivered at a panel discussion on recovery at the 1957 American Speech and Hearing Association (ASHA) conference. All presenters, including individuals like Charles Van Riper, S. Waldo Coleman, and Joseph Sheehan, stuttered and made significant contributions to SLP as clinicians, educators, and researchers.

The present study offers an initial effort to explore the relationship between guilt and recovery from stuttering. Its conclusions are noteworthy for at least two reasons. First, it furthers an important need for qualitative research in SLP to explore the multi-faceted, complicated nature of stuttering from a holistic perspective (Simmons-Mackie & Damico, 2003; Damico & Simmons-Mackie, 2003). As Brinton and Fujiki (2003) put it, clinicians must ask a broad question “What’s going on?” to fully appreciate the needs of their clients (p. 165). The heuristic method featured in this study, Burke’s dramatic pentad, is well suited for this task, as it resonates with Brinton and Fujiki’s query. Burke (1969) explains that dramatism explores motives with the question, “What is involved, when we say what people are doing and why they are doing it?” (p. xv). Answers revolve around his pentad’s terms, which correspond to basic elements of narratives. The pentadic term “act” corresponds with a story’s “what,” “agent” with “who,” “scene” with “where” and “when,” “agency” with “how,” and “purpose” with “why.” As will be shown, when a particular dramatistic term is dominant in a story, a narrator’s point of view is revealed, thereby allowing scholars and clinicians a way to understand “what is going on.” Second, the current study keys on guilt in narratives by demonstrating the utility of Bruner’s innovate but seldom used modification of Burke’s pentad. By adding the concept of “Trouble” to the pentad, Bruner helps researchers examine discourse for cultural imbalances between paired pentadic terms called ratios. For instance, as hinted in our brief example above, the “scene” of a business meeting calls for “agents” who are fluent. “Trouble” may occur when a person who stutters is “mismatched” in the scene. Bruner’s method draws attention to the guilt generated by such imbalances and to the need for storytellers to seek resolution.

**Literature Review**

To understand the emotional predicaments experienced by PWS, it is helpful to appreciate the influences of the disorder on people who stutter. Most current models for describing the problems encountered by PWS suggest that stuttering can lead to communication difficulties and restricted participation in social aspects of life (Yairi & Seery, 2011; Yaruss & Quesal, 2004). For example, research has consistently found that PWS of all ages can be viewed in a pejorative, stereotypical manner by various professional and lay populations. These perceptions often contribute to negative interactions with others (Craig, Tran, & Craig, 2003; Evans, Healey, Kawai, & Rowland, 2008; Hughes, Gabel, Irani, & Schlagheck, 2010). Children and adolescents who stutter are at increased risk for bullying from peers (Blood & Blood, 2004; Blood, Doyle, Blood, & Nalesnik, 2010; Langevin, Bortnick, Hammer, & Weibe, 1998). Furthermore, Van Borsel, Brepoels, and Coene (2011) described how a group of adolescents and young adults who did not stutter reported that stuttering affected perceived attractiveness.
Stuttering also concerns people who stutter in specific contexts. In education, PWS often score lower than people who do not stutter on tests measuring educational achievement (O’Brien, Jones, Packman, Menzies, & Onslow, 2011). Individuals with chronic stuttering often experience difficulties completing verbal activities in classrooms or avoid activities that lead to high academic achievement. A growing body of literature suggests PWS encounter challenges in the workplace. For example, employers and the general public report that certain careers (e.g., teaching) and aspects of employment (e.g., presenting oral reports) will be challenging for PWS (Hurst & Cooper, 1983; Gabel, Blood, Tellis, & Althouse, 2004). Additionally, research indicates that adults who stutter find difficulties securing employment, earning promotions, and performing communication tasks at work (Klein & Hood, 2004; Rice & Kroll, 1994; 1997).

Because of problems in social, educational, and vocational milieus, PWS may develop problems with emotional adjustment (Craig & Tran, 2006) and face a reduced quality of life (Blumgart, Tran, & Craig, 2010; Craig, Blumgart, & Tran, 2009; Cummins, 2010; Yaruss, 2010). For decades, research has suggested that PWS experience high levels of anxiety and stress related to speaking and social experiences (Craig, Tran, & Craig, 2003; Ezrati-Vinacour & Levin, 2004). Specifically, Tran, Blumgart, and Craig (2011) demonstrated how individuals who stutter were more likely to report high levels of distress and negative moods than people who do not stutter. Stein, Baird, and Walker (1996) suggested that PWS have an elevated risk of social phobia. And, Iverach et al. (2009) indicated that PWS are more prone to developing mental health and personality disorders than people who do not stutter. In total, there is ample evidence that stuttering leads to challenges related to emotional and psychological adjustment.

For individuals who continue to stutter into adulthood, successful management of the problem often encompasses more than the mere performance of speech; it also involves altering the ways that stuttering is managed psychologically and socially. For instance, rather than simply learning to speak fluently, PWS may also learn to stutter easily while minimizing feelings of shame. Dealing with life issues related to stuttering is typically addressed within one of two categories of research.

One way to conceptualize this process of successfully managing stuttering is through “coping” with the disorder. Most approaches to coping involve assisting individuals to physically adjust ways of speaking to promote fluency, to reduce the severity of stuttering, or to do both (Guitar, 2006; Yairi & Seery, 2011). Other factors, including emotional and cognitive, are also important to consider. In a study exploring the experiences of six adults who reported successfully overcoming their stuttering, Anderson and Felsenfeld (2003) identified “self-motivation” as salient for recovery. Plexico, Manning, and Dilollo (2005) discovered similar results in interviews with PWS. Further, Plexico, Manning, and Levitt (2009a) found that a group of nine adults who stutter reported that it was helpful to develop a self-concept as one who would no longer avoid speaking, despite stuttering, and who would be assertive in communication. These tactics contrast with those used by some PWS who avoid speaking, which often leads to reduced communication opportunities and negative attitudes towards speaking and stuttering. It also appears important to increase one’s awareness of stuttering, as a means to become a better communicator (Finn, Howard, & Kubala, 2005) and to develop an understanding of stuttering as a topic of study (Corcoran & Stewart, 1995; Plexico, et al., 2005; Plexico et al., 2009a:b; Corcoran & Stewart, 1995). In short, becoming self-motivated, developing assertiveness, and learning more about stuttering may lead to positive changes in speaking and managing stuttering.

A second way to conceptualize the process of managing stuttering involves “recovery,” which is comparable to “coping.” In interviews of 27 adults with chronic stuttering, Quarrington (1977) asked participants to discuss their recovery. Participants reported that specific events, or “turning points,” aided confidence, improved speech, enhanced feelings of self-worth, and improved emotional reactions to stuttering. Similarly, Plexico et al. (2005) interviewed six individuals who reported being recovered from their stuttering. Part of this process involved sharing specific events regarding overcoming stuttering. By recalling these stories, they learned to take responsibility for their actions, to take risks, and to modify their thinking about stuttering.
Our goal in the present essay is to extend qualitative research on the social dimension of stuttering to include accounts of recovery. As demonstrated, existing literature offers fruitful examinations of how PWS perceive their disfluency and its influence on their interactions with others. However, this literature is limited in its treatment of how “recovered” PWS have successfully managed their disfluency to bolster perceptions of self, limit anxiety, and improve relations with others. We speculate that recovery may also involve redress of what Bruner calls “Trouble” and Burke calls “guilt.” Both emerge from breaches of social expectations. To offer a test case for this conjecture, we examine transcripts of speeches offered at a 1957 panel on recovery from stuttering featured at the American Speech and Hearing Association in Cincinnati, Ohio. This panel included presentations by Charles Van Riper, S. Waldo Coleman, Wendell Johnson, John Clancy, Charles Bluemel, Dean Williams, and Joseph Sheehan. The basic prompt to each presentation was: “Discuss your recovery from stuttering.” From personal and historical perspectives, the co-authors judged these narratives to be an important dataset to consider for understanding the process of recovery from stuttering. To date, no studies have utilized the information shared in these narratives from early experts in the field of SPL. Each oration was transcribed and viewed as an independent account of the experience of the given speaker’s recovery from stuttering. To the transcripts, we apply Bruner’s modified version of Kenneth Burke’s dramatistic pentad, a critical method that facilitates charting of motives that transform interpretations of experience. In the present case, we look for motives that may impel PWS to successfully cope with feelings that hinder progress toward recovery.

Method
Theoretical Basis For Analysis: The Dramatistic Pentad
Kenneth Burke’s dramatistic perspective offers a useful approach to the study of narratives, which he might call “equipment for living.” As Brummett (1984) explains this Burkean phrase, people use literature as “equipment” to “confront their lived situations, celebrate their triumphs, and encompass their tragedies” (161). Proverbs, poems, novels, stories, and the like can “name typical recurrent situations” (Burke, 1973, p. 293) and offer “strategies for dealing with situations” (p. 296). To illustrate, Burke (1973) shows how some proverbs effectively name the situation of “disappointment” and then offer the coping strategy of finding consolation. For instance, “The sun does not shine on both sides of the hedge at once” (p. 294) both labels experience and mollifies. By examining a person’s or group’s “literary equipment,” scholars may “assemble and codify” discourses that influence ways of thinking (p. 302) and find “representative anecdotes” that synopsize vocabularies that transform perceptions. McClure (2009) uses dramatism to show how stories of young-earth creationists reframe “scientific evidence” and “inconsistent” details in the Bible to conclude that the earth was created only several thousand years ago (p. 204).

Studies like McClure’s employ Burke’s pentad to chart situations, which Burke also calls motives. The pentad’s terms constitute elements of a story. Burke (1969) explains, in a “rounded statement of motives,” there must be an act that “names what took place, in thought or deed,” a scene that encompasses “the background of the act, the situation in which the act occurred”, an agent who “performed the act,” an agency (“means or instruments”) used by the agent, and purpose for the act (p. xv). These terms are “forms of talk about experience” and “transcendental categories” that exemplify human thought and communication. They also help critics explore how people “necessarily experience” the world through language (p. 317). To elucidate the pentad’s heuristic capacity, he correlates each term with one of the seven modern philosophical schools. Scene correlates with materialism; agent correlates with idealism; agency correlates with pragmatism; purpose correlates with mysticism; and act correlates with realism. Nominalism and rationalism do not pair with any one particular school but can be a characteristic of, and thus correlate with, any one of them. Thus, the pentad accounts for an inclusive range of perspectives, all of which have an “objective validity” (Burke, 1984, p. 257). To discern how motives transform views of reality, Burkean critics look for “pentadic ratios” in discourse. Individual pentadic terms seldom stand alone and often form pairs that reveal how attentions are shaped by symbolic action (Burke, 1969, p. 15; p. 420). For instance, an act-scene ratio maps how a particular action (e.g., shouting “Don’t marry her!”) changes interpretations of scene (e.g., a church wedding). A scene-agent ratio grounds a person’s identity (e.g., “I’m a country girl”) in environment (e.g., living on a farm).
To study narratives, Bruner modifies the pentad. Bruner (1990) writes, stories “are composed of a pentad of an Actor, an Action, a Goal, a Scene, and an Instrument—plus Trouble” (p. 50). Burke’s five terms constitute “sufficient descriptions of ‘story stuff’” (Bruner, 1986, p. 20) but may be inadequate to describe the driving forces behind a full range of motives. Thus, Bruner develops Trouble to demonstrate how dramas in stories stem from “mismatches” (Bruner, 2004, p. 697) or “imbalances” (Bruner, 1990, p. 50) between terms of a ratio. He writes that Trouble occurs when “an Action toward a particular Goal is inappropriate in a particular Scene, as with Don Quixote’s antic maneuvers in search of chivalric ends; an Actor does not fit the Scene, as with...Nora in A Doll’s House...” (Bruner, 1990, p. 50; 1986, p. 20; 2003, p. 34). With Bruner’s modified pentad, Beck (2006), a distinguished professor of nursing, finds Trouble with a study of birth-trauma narratives. One interviewed subject expected admission to a hospital’s maternity ward (scene) so that she (agent) could suitably deliver her baby, who died about 24 weeks into the pregnancy. However, due to a staffing shortage, delivery occurred in a private room of a “ward full of mums and their lovely LIVE babies” (p. 460). By identifying Trouble, Beck aims to understand patients’ views and, ultimately, to improve their care. She assumes a resonant fit between terms in ratios, as does Bruner (1990), who writes, “Trouble presupposes that Actions should fit Goals appropriately. Scenes should be suited to Instruments, and so on” (p. 50).

When a breach of cultural expectations occurs, how is it addressed? The answer concerns the resolution of “human plight.” Bruner (1986) explains that Trouble revolves around the fabula, or timeless structure, of a story. In this, three constituents—plight, characters, and the consciousness of characters—move toward a “sense of ending” (p. 21). More elaborately, he explains this structure in relation to “steady state, breach, crisis, redress” (Bruner, 1986, pp. 20-21) and to “initial canonical state, peripetia [or turning point], action, resolution, coda” (Bruner, 2005, p. 58). Rather than fully resolving Trouble, movement toward an “ending” has two possible outcomes. First, Bruner (1991) says that Trouble may be contained; through stories, “the comprehension of plight..., being made interpretable, becomes bearable” (p. 16). Second, if containment is not possible, Bruner (2004) claims that breaches may give rise to “a new legitimate order” (p. 697). To elaborate Bruner’s ideas about plight, Althouse and Anderson (2012) argue that Bruner’s concept of Trouble is comparable to Burke’s concept of guilt. This is “Burke’s all-purpose term not only for moral guilt but for alienation, anxiety, uneasiness, shame, disgust and tensions of all kinds, including what Aristotle calls peripeteia, Burke calls poeima, and Bruner calls Trouble” (p. 10). By making this comparison, Althouse and Anderson point out that narratives play an important role in providing cathartic release. This cleansing of guilt marks symbolic “killing” through either mortification, “the systematic ‘slaying’ of the unruly impulses...within ourselves, or scapegoating, the projection of our own guilt onto a sacrificial victim whose suffering provides vicarious expiation of our own ‘sins’” (p. 16).

**Procedures**

With Bruner’s modified pentad, we examine speeches found on The Stuttering Homepage (http://www.mnsu.edu/comdis/kuster/), a website devoted to disseminating information about stuttering to parents of children who stutter, speech-language pathologists, and other important constituency groups. For this study, data came from a section of webpage entitled “Voices from the Past and Present.” It includes an archive of audio recorded lectures given by researchers and clinicians who experienced successful recovery from stuttering. Specifically, this study analyzes the aforementioned speeches delivered on a panel on recovery from stuttering featured at ASHA’s 1957 convention.

Transcripts were examined for pentadic ratios centering on recovery. For this process, we followed the lead of Beck (2006) and others who utilize pentadic analysis (e.g., McClure, 2009; Meisenbach et al, 2008). First, in each speech, we identified pentadic terms in personal accounts of stuttering. Thus, as applicable, elements of stories were labeled with “act,” “scene,” “agent,” “agency,” and “purpose.” Second, we searched for dominant pentadic ratios in the speeches. Like Beck (2006), we paid particular attention to “strategic spots of ambiguity or imbalance,” where one term of a ratio “transformed” the other (p. 456). By finding ambiguities and imbalances, motives were identified that illuminated how speakers managed their disfluency. Careful study of these motives revealed storytellers’ points of view and how those points of view affected perceptions.
Given the nature of this study, assumptions for credible qualitative research were addressed. Qualitative researchers do not employ control groups, randomized sampling of participants, or other methods that are designed to account for extraneous variables or other threats to validity (Creswell, 2003). Thus, authors often argue that their methods and conclusions do not stem from personal biases. In the present study, we attended to “credibility” and “validity” with the following steps, which are similar to those discussed by Corcoran and Stewart (1995), Plexico, Manning, and Dilollo (2005) Plexico, Manning, and Levitt (2009a: b), Corcoran and Stewart (1995), and Creswell (2003). First, to assure that the narratives (i.e., “data sets”) were valid, the third author transcribed the recorded speeches verbatim from the website and reviewed the transcripts multiple times to assure that they accurately represented the speeches. The second author and a trained graduate assistant also reviewed transcripts while listening to recordings. Second, the first and second authors, who were primarily responsible for the analysis, were clear about their potential biases. The first author is an associate professor of communication studies, does not have an academic background in stuttering, and is not an SLP. Thus, he had very few preconceived notions about stuttering and recovery from stuttering prior to initiating analysis. The second author is a person who stutters, an SLP, a Board Recognized Specialist in Fluency Disorders, and has many years of experience providing treatment for people who stutter and doing research on stuttering. The researchers were careful to not allow their prejudices to taint analysis of the data. For example, as he offered background information about stuttering and its treatment to the first author, the second author openly discussed his personal and professional experiences. In this process, the first and second authors assisted each other to curb bias. Third, the two primary researchers completed analysis of the data independently and discussed their coding of the results (e.g., identifying pentadic ratios) to assure agreement regarding the data. Final coding was mutually agreed upon and included for analysis.

Results

Preview: Basic Findings

Three dominant themes emerged from our readings. First, we found that speakers described physical manifestations of stuttering (e.g., oscillations, blocks). Second, they detailed their struggles to meet social expectations for fluency. And, third, they critiqued institutionally sanctioned treatments of stuttering of their day. These themes are integrated into two parts of the forthcoming analysis. In the first, we find Trouble in scene-agent and agency-agent ratios, and we chart how Trouble, in relation to the given three themes, affected speakers’ perceptions. These perceptions constrained speakers’ motivations needed to advance the process of recovery. In the second part of our analysis, we chart how speakers redressed Trouble generated by pentadic imbalances detailed in the first section. With agent- and act-centered ratios, we found that redress occurred when speakers’ motivations for change became centered in self. Put differently, successful atonement began when they actively participated in “treating” themselves.

Finding Trouble: Scene- And Agency-Centered Ratios

The Physical

The physical is a necessary component of the scene of recovery, as stuttering is manifest in the performance of speaking. More importantly, “the physical” influences how speakers define themselves and their abilities, thereby establishing motives that may be mapped with scene-agent ratios. For instance, Coleman identifies himself as a stutterer because “blocks” occasionally interfere with his communication with others. Clancy claims that, as a PWS, he must manage conflicts between an internal “desire” to accomplish certain acts and an actual “ability” to do so. And, Van Riper says that, because of his disability, “I cannot talk normally.” Oscillation and quakes affect his fluency, despite his expertise and training. About this situation, he quips, “On my dying deathbed, it'll be interesting to see if I can say, ‘Farewell, dear world.’” Given such scenic constraints, Van Riper speculates that, “I do not think I'll ever get cured.”

Superficially, associations between disfluency and identity are unremarkable denotations. Yet, they point to deep emotional effects of stuttering—evidence of “Trouble”—that may be charted in mismatches between a scene that typically grants people the physical ability to speak fluently and agents who cannot do so. Van Riper characterizes this situation with words like “horror,” “anxiety,” “revulsion,” and “terror.” He says, “there still is this necessity on the part of the stutterer to bear the horror of his mouth as this horrible evil.” To illustrate, Van Riper compares experiencing stuttering to having one’s arm inexplicably begin to “oscillate in the air” or, when trying to itch his or her
nose, having one’s arm become “fixed in mid air. There is a horror there. There is a little death. There is a moment of such extreme frustration of the self that it terrifies one.” Clancy uses the word “goriness” to describe the mismatch between that which is physically usual and that which is actually performed by agents. Elaborating implications of this situation, he asserts “that the stutterer, as a person, is often very sensitive, very self conscious, indecisive, very tense, and easily confused.”

Although physical manifestations of disfluency are inseparable from the experience of being a person who stutters, they seem relatively mundane and are mentioned rather infrequently in the speeches offered at the symposium. A possible explanation for this is offered by Coleman. He asserts that, for recovering PWS, physical symptoms are merely a tip of “an iceberg. There’s only a very small part [of stuttering] that shows.... The Big problem is the feeling underneath and, until something is done about that underneath feeling, we do not get very far” in recovery. To elucidate that “feeling underneath” the “thing” of stuttering, speakers explore ideas that may be sorted into two additional themes: social expectations for fluency and limits of therapy. Both affect how PWS perceive themselves and impede progress toward successfully coping with disfluency. More importantly for purposes of this study, both generate guilt.

**Social Expectations**

Our findings suggest that social expectations for talk negatively affect confidence levels of PWS and their fluency, a situation may be charted with scene-agent ratios. During his childhood, Bluemel recalls that his stuttering was not, initially, a significant matter: “there were...ordinating phases of organization and disorganization of my speech, so the impediment came and went.... Meanwhile, however, I was care free and unconcerned, and I was no more bothered by my speech than I was by dirty hands.” This changed in the third or fourth grade. Then, partly because of a fear of oral examinations at school, Bluemel developed a “phobia for a large vocabulary of words and a phobia for many speech situations,” despite a supportive principal and “kindly and helpful” parents. Simply put, certain social contexts (e.g., school) required spoken communication (e.g., performance on oral exams). However, the Trouble was this: scenic circumstances created an apprehensive state of mind for Bluemel, the agent, thereby influencing his speech.

Sheehan also demonstrates how Trouble is generated by imbalances between social expectations for speaking in public and the state of mind of a person who stutters. Commenting on his own mindset as a child, he notes that speaking with others created fright. “The fear that I felt was not a fear of stuttering as doing a specific thing, that it is not a fear of doing that particular act,” he recollects, “but it was a very devastating fear that I could never say the word I had to say.” For instance, Sheehan felt anxiety when phoning his father, a newspaper editor, “especially near and under the pressure of a news deadline.” Sheehan’s fluency thus suffered. What is more, circumstances like these influenced Sheehan’s initial career choice: “when I went into college, I chose a non-speaking vocation, chemistry, because I could get along with a laboratory, and I could work with things even if I couldn’t communicate so well with people. And, I even...spent about four years as a chemist.”

Narratives like Bluemel’s and Sheehan’s, which show imbalances in scene-agent ratios, point to a culturally-grounded impediment to recovery, “guilt.” This is, as mentioned, Burke’s comparable term for Trouble and occurs when tenants of social “Order” are broken. “Victimage” follows in the form of either mortification or scapegoating (Burke, 1970, pp. 4-5). Guilt is relevant here because it is noted explicitly by several speakers, including Sheehan. With a sense of mortification, he admits that personal guilt developed from the perception that he “hurt” people: “I knew that my speaking with others created fright. “The fear that I felt was not a fear of stuttering as doing a specific thing, that it is not a fear of doing that particular act,” he recollects, “but it was a very devastating fear that I could never say the word I had to say.” For instance, Sheehan felt anxiety when phoning his father, a newspaper editor, “especially near and under the pressure of a news deadline.” Sheehan’s fluency thus suffered. What is more, circumstances like these influenced Sheehan’s initial career choice: “when I went into college, I chose a non-speaking vocation, chemistry, because I could get along with a laboratory, and I could work with things even if I couldn’t communicate so well with people. And, I even...spent about four years as a chemist.”

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the expectations of recovery for a person who stutters. Johnson explains that, if a PWS did not bear cultural judgments, he or she would not think of him- or herself as a “special kind of person.” Thus, he or she might be freed to explore new possibilities for recovery and might be able “to find it possible and rather natural, almost, to ask some kinds of questions that he hadn’t asked before.” Remove the label, remove the Trouble, Johnson might say.

**Limits of Therapy**

Beyond scenic components of stuttering, agency is mentioned as an impediment to recovery. Ideally, therapies (agencies) aid PWS (agents) to manage disfluency and, consequently, bring harmony to agency-agent ratios shared in narratives of PWS. However, several speakers at the symposium reveal occurrences of Trouble, as they characterize many then existing, institutionally sanctioned agencies as inadequate. Williams recalls that, when he was about 10 years old, he attended a clinic at the University of Iowa. There, Williams had his “handedness changed…. I do remember I learned to play ping pong with my left hand.” Also, “I learned to build a birdhouse. I can’t really remember what went on speech wise, in terms of what I learned about speaking.” Of course, these types of approaches did not then nor now make much sense when treating a person who stutters. Williams continues, “In the years after that, I did what amounted to more serious work on my speech” through study, therapy, and discussions. Yet, many of the tools designed to promote change ultimately failed. In fact, Williams admits that some successes with his speech were simply imagined, the result of “kidding” himself. He does not blame his clinicians for these outcomes. Instead, Williams insinuates that therapies created “Trouble” by failing to help him understand and evaluate “being scared.” That is, he needed to learn that “it was essentially normal to be scared in certain speech situations” and learn to manage apprehension.

Coleman also describes shortcomings of treatments. “I don’t know why they called them therapists at that stage [when he was young],” he says. “And his [one of Coleman’s therapist’s] approach was to have me learn to talk all over again” at age 13. This retraining “consisted of my not being allowed to speak to anyone except the person who called at the home during that period. And I carried a scratch pad...whenever I needed to ask a question, or give an answer, I had to put it on a scratch pad.” Following the failures of these approaches, which amounted to what he and other panelists referred to as “quackery,” Coleman worked with other therapists and experienced equally ineffective results. To account for this, he says, “I think the basic reason why these were unsuccessful, I was probably anywhere from 18-20 during that period, was that the people were not really teaching. They did not tell me ‘why’; they said simply ‘do.’ And in business it’s so vital...to tell people why they are supposed to do certain things.”

As revealed by such scene-agent and agency-agent ratios, our analysis details Trouble. Norms for fluency are rooted in the physical, the social, and the clinical. However, for many people who stutter, meeting relevant expectations for fluency regularly is unattainable. Again, as Van Riper puts it, “I do not think I’ll ever get cured.” How, then, did speakers at the symposium take steps toward coping successfully with their disability? To facilitate answers to this question, the next section of our analysis explores remedies for Trouble. Specifically, the next section explains how speakers addressed impediments to recovery by fostering a sense of personal empowerment that may be charted with agent- and act-centered ratios. In these, we find what Bruner calls redress and what Burke calls a purging of “guilt” in a quest for “redemption.”

**Addressing Trouble: Agent-Centered Ratios**

**The Physical**

Although stuttering is linked to speaking, remedies aimed directly at the physical were discussed infrequently at the symposium. Again, this situation is not surprising, given Coleman’s assertion that disfluency is the “tip of the iceberg” for PWS. Still, the relevant pentadic imbalances in scene-agent ratios call for some form of redress designed to address fluency itself. Thus, in passing, Coleman touches on the benefits of physical relaxation to enhance fluency. However, unlike all other speakers, Van Riper devotes a significant amount of time to the given theme and he advocates developing attitudes that may be charted with agent-centered ratios.

Van Riper promotes what we call physical desensitization as a means to rectify Trouble. He states that one must have the ability “to touch the moment of stuttering, to be able to come into contact with it, without revulsion, without horror, without anxiety.” In
other words, he recommends that agents alter their states of mind to see the physical dimension of stuttering in a new way. To explain, Van Riper draws on personal experiences in his younger years at the University of Iowa. There, as a graduate student, he and other people who stutter were “experimental animals” who had “needles stuck in our cheeks.” He continues, “the only therapy we had was to look at ourselves in the mirror and to watch and to see what was going on.” He “hated” the images but admits that understandings gained were “essential” to development of his physical responses to stuttering. For instance, Van Riper describes how he heightened mindfulness (agent) to strategically view of his body (scene): “I found that there were certain spots in my lips, in my tongue, and in my jaw which would set off tremors.” With awareness of these “spots,” he increased avoidance of oscillations and blocks. In short, Van Riper redressed Trouble associated with given scene-agent ratios through the careful study of his body. His refined perceptions lessened the “horror,” “revulsion,” and “anxiety” of stuttering and, consequently, improved the performance of speech. In pentadic terms, Van Riper’s narrative shifted from scene- to agent-based ratios. As Van Riper himself put it, through his efforts, “I wanted to have some right to determine my own course of action.” Through taking responsibility for his recovery, Van Riper was able to begin to purge the guilt related to his stuttering.

**Therapy**

Like redressing Trouble generated by the physical dimension of stuttering, redressing Trouble generated by inadequate therapy is addressed rather briefly the symposium. Three speakers take on the issue. Bluemel argues that a person who stutters is psychologically “poorly integrated”; disjointed “basic speech” results from disjointed “mental speech.” Thus, Bluemel advocates a particular kind of therapy: the retraining of mental processes. Clancy and Coleman, however, suggest a different approach. Rather than endorse a particular therapy, they suggest that successful treatment, whatever it happens to be, hinges on an agent’s attitude. Put differently, to balance Trouble created by mismatches between therapy (agency) and a person’s demonstrated fluency (agent), agents must cultivate a positive state of mind to spur successful coping with stuttering, a situation that may be charted with agent-agency ratios.

Clancy advocates “enthusiasm.” During his childhood, he received poor therapy at a “commercial school of quacking.” He might have protested his treatment at the time but admits, “I was too young [12 years old] to question everything that was put in front of me… [and] to be a courageous man.” This condition changed when he matured enough to develop a fitting attitude—an attitude of “enthusiasm”—that aided his recovery. What is more, he professes that recognizing the influence of a positive state of mind will help therapists, also. To “everyone in the field of speech correction,” Clancy recommends that, regardless of the various methods used, they must cultivate in clients “enthusiasm.” Without this, “you’re lost.” He reinforces his point with a brief anecdote. At the University of Michigan’s Speech Improvement camp, where he was director, Clancy says that the methods (agencies) used during 26 years worked because of the development of enthusiasm in clients (agent).

Coleman also proposes an approach to therapy that may be charted with agent-based ratios. Like Clancy, Coleman observes that, in his youth, therapists provided him with inadequate instruction and motivation, resulting in imbalanced agency-agent ratios. He recalls that significant steps toward his recovery only began when he worked with a “pioneer in mental hygiene.” She introduced Coleman to, as he puts it, his “unconscious mind,” which controls the “power of habit.” By recognizing his unprofitable habits, Coleman realized that “I must develop a new way of speaking. In other words, I must be something different”—a transformation that required a force of will centered in agent. In light of this realization, he admits that, in the past, he looked to therapists for answers when he should have looked to himself. As Coleman confesses, “I think that it is true of so many stutterers that we do not realize that we have to cure ourselves, that the most any teacher can do is show us the way.” Coleman’s “way” includes three components. One deals with the physical relaxation of his speech tract. Second, he notes a kind of relaxation “done primarily through a way of life, through my attitude towards others, towards myself, and especially to have tolerance towards both.” This form of relaxation results in improved fluency. Third, Coleman notes acceptance of the “fact that I may occasionally stutter and do not worry,” an agent-based state of mind that leads to “a position where the new habits will become more powerful than the old ones.”
Social Expectations

Most extensively, presentations at the symposium featured stories about managing and reducing anxiety associated with cultural expectations for speech. In these orations, mismatches between a scene that expects fluency and agents who stutter are addressed with what we call social desensitization. That is, speakers recommended reframing their perceptions of social norms with attitudes that may be charted with act-centered ratios. We believe that this reframing is critical to how PWS cope with disfluency. Because there is no known “cure” for all cases of stuttering, many PWS must necessarily be prepared to manage anxiety generated by efforts to conform to cultural expectations for speech. Our reading of texts indicates that this process involves the homeopathic purging social guilt associated with stuttering through acts of breeching social expectations for fluency.

Such a need to challenge cultural expectations is addressed by speakers who believe PWS should find ways to reduce avoidance of their disability. For instance, Williams states that perfect and regular fluency is unattainable for him. As mentioned, therapy during his younger years failed to alleviate his fear of speaking in social situations. Williams admits that he harbored “a faith...that if I worked hard enough I would conquer my fear of stuttering and could...then control my stuttering.” However, this faith was ill founded. His fluency ultimately improved when he realized that a degree of apprehension was “essentially normal,” a recognition that allowed Williams to spend “less time trying to control something [stuttering] and more time trying to talk.” In his presentation, Sheehan posits that PWS face an “approach-avoidance conflict.” One may either engage in “going ahead” by working through disfluency or in “holding back” by staying silent. The former is preferred, Sheehan reasons, even if one presses forward in a “blind attack.” If a person who stutters holds back, he or she misses opportunities to quell anxiety and, thus, perpetuates Trouble.

To reduce avoidance, the purging of guilt is crucial. In our reading of the transcripts, alleviation is evident in at least two ways. One involves purging of guilt vicariously through observations of others. As he discusses his “high points” in recovery, Sheehan offers a story about “an older stutterer, a very stubborn Dutchman, who had worked with Van Riper, by the name of Jack Devour.” Sheehan admired how Devour stuttered “very openly and comfortably to his roommate. I had never seen anybody stutter and not be ashamed of this before. Always before it had been something shameful and I think this really had been an influence on me.”

Like Sheehan discusses “high points,” Van Riper discusses “crucial experiences” in coping with the “monster” of his stuttering. To illustrate one crucial experience, he recounts working with “Bryn” Bryngelson at the University of Iowa. After a long day of therapy, Bryngelson decided to practice “voluntary stuttering” publicly in a store. “Our task...was to attempt to substitute a voluntary controlled bit of behavior for the old automatic behavior, which was so abnormal.” “Voluntary stuttering” developed into what Van Riper coined as “stuttering modification” therapy and has continued to be a viable approach used by many SLPs today. With Van Riper watching, Bryngelson stuttered to the clerk, who “writhed.” Still, “Bryngelson kept at it, and at it, and at it, and I was right there with him, and it traumatized me.” Van Riper continues, although the “poor clerk had died a thousand deaths,” Bryngelson concluded his business: “And after he was through, he said, ‘Well I got em’ didn’t I?’ And, he handed me the pipe cleaners.” Van Riper says that this experience sharpened his “objective ability to touch the stove that had burned me, to touch the snake, because he [Bryngelson] had touched the snake. That’s the only way you become a herpetologist.” In both cases, Sheehan’s and Van Riper’s, the act of observing breeches of social norms facilitated the construction of new outlooks toward recovery, or coping effectively, with stuttering.

Another way to alleviate guilt is to directly breech cultural rules. Sheehan recounts a speech he gave to the Optimist Club in Kalamazoo, Michigan. During about two minutes, the only meaningful word he said was “I.” He admits to feeling horrible immediately after the speech; as he put it, in that oration, “I had done about as much stuttering in that situation as I had ever thought I could possible do.” Despite this feeling, Sheehan notes that feedback from the audience was favorable: a “surprising number to me came up to congratulate me saying such things like, ‘Boy, you got guts. You’ll get along alright.’” Reactions like these led Sheehan to conclude that, “Everything after that [speech] was kind of an anti-climax in terms of the stuttering I did.” Through the act of stuttering in public, Sheehan’s state of mind changed, and he realized a degree of independence from social expectations for
fluency. In short, here, we see an act-based ratio that opens possibilities for new agent-centered attitudes.

Conclusion and Discussion

With Bruner’s modification of Burke’s pentad, we analyzed speeches presented on a panel about recovery from stuttering at ASHA’s 1957 convention. Speakers were people who stutter and who served the field of speech and language pathology as leading teachers, clinicians, and researchers. To craft their orations, speakers keyed on offering insights about how they managed their disability. Our analysis revealed motives in the speeches regarding impediments and aids to recovery. Specifically, part one of our analysis showed three kinds of “Trouble” that hampered coping with stuttering in emotionally positive ways. First, speakers identified mismatches between a physical scene that typically provides humans with the ability to speak fluently and individuals, people who stutter, who are unable to do so. To describe this situation, words like “evil,” “horror,” and “goriness” were employed. Second, speakers identified mismatches between a cultural scene that expects fluency in settings like classrooms and agents who face difficulties speaking without stuttering. Social pressures to communicate fluently heightened individuals’ anxieties and, thus, increased disfluency. Third, speakers revealed mismatches between therapies designed to help clients and outcomes experienced by those treated. The therapies failed to account for the anxiety associated with stuttering and, thus, failed to yield positive results. In part two of our analysis, we found motives that accounted for and transcended the barriers noted in the first part of our analysis. On the matter of physical scene, we noted how Van Riper studied and became familiar with his vocal tract. As a result, he enhanced his ability to manage disfluency and lessened his anxiety about speaking. On the matter of therapy, we charted how panelists at the symposium redressed Trouble by modifying their states of mind. With attitudes based on “enthusiasm” and “acceptance,” speakers explained how they developed new, agent-centered outlooks on treatment. On the matter of social expectations for fluency, which was featured prominently by speakers, we found motives geared toward the acceptance of breeching social norms. Vicariously and directly, acts performed by agents to violate conventions provided symbolic release from emotional burdens associated with stuttering and, thus, from guilt.

The results of our analysis have at least three key implications. First, they demonstrate the theoretical importance of Bruner’s appropriation and extension of Burke’s pentad. When elucidating his method, Burke (1969) underscores the resiliency of scene. For instance, he suggests that because the scene both “contains the act” and “contains the agent,” then “the nature of the acts and agents should be consistent with the nature of the scene” (p. 3). However, Burke also notes that humans do not simply and mechanistically respond to their environments. A synecdochic relationship between part and whole may be irregular and, consequently, “we encounter the divisive relationship, the genitive transformation of something which is ‘a part of’ a larger context into something which is ‘apart from’ this context” (p. 107). In speeches examined for this study, dissonance exists between agents who stutter and a scene that expects fluency, which creates a “divisive relationship.” Although Burke does not explicitly address the resolution of such inconsistencies, Bruner does. Bruner (1991) suggests that, by telling stories, people can explain and temporarily “contain” breeches that may be charted by the pentad (p. 16). Bruner (2004) also suggests that, if breeches cannot be contained, “a new legitimate order” may emerge (p. 697). In other words, people may create “possible worlds” that allow “alternative personal perspectives” (Bruner, 1986, p. 54). The present study showed how “recovered” people who stutter “contained” their breeches of cultural norms and, arguably, sought new “possible worlds.” In sum, theoretically, the present study offers a useful approach for future explorations of how PWS cultivate agent-driven perspectives that improve self perceptions.

Second, the results of our study also reinforce and extend existing research in speech and language pathology. As noted, qualitative studies in the field have identified key elements of recovery, including increased understanding of stuttering, acceptance, attitude change, and emotional coping (Anderson & Felsenfeld, 2003; Plexico et al., 2005; Plexico et al., 2009; Corcoran and Steward, 1997). These studies feature different methods and different participants, but similarities between those results and ours are striking. What is more, although the speeches featured in our study were delivered decades ago, it is remarkable how the experiences of the speakers appear to be similar to those reported in recent studies. Nevertheless, previous research has not keyed explicitly on “Trouble” or “guilt”
associated with cultural expectations. Based on our readings of the featured speeches, we surmise that guilt is pervasive cannot be overlooked. Thus, it would be fruitful to apply our approach to other extant texts by “founding fathers” of SLP on “The Stuttering Homepage” and to recent panels on recovery. Comparing such artifacts from an array of sources and time periods may further appreciation of factors crucial to the process of recovery.

Finally, the results of the present study have obvious implications for therapy. As underscored previously, panelists featured in this study were leading experts in SLP during the field’s early years. The personal experiences of these speakers shaped their beliefs about stuttering and, consequently, influenced initial efforts to study and formulate treatments. Put another way, clinical practices of today are firmly rooted in historic insights of individuals including Charles Van Riper, S. Waldo Coleman, and Joseph Sheehan. By studying people like these, researchers may broaden thinking about what constitutes effectual therapy. The present study hints that successful therapeutic outcomes go beyond merely reducing instances of disfluency. In fact, successful outcomes also include changes in how PWS see themselves, reductions in negative emotional reactions to stuttering, acceptance of stuttering, and other attitudinal changes. By using Bruner’s modified pentad, researchers may extend understandings of how therapy may aid recovery.

References


Continuing Education Questions

Directions: Choose the best answer for each question as you read each article. Then log in at http://www.ohioslha.org/membersonly/index.asp to answer the assessment questions. Follow the online directions to earn free ASHA continuing education units (CEUs), while the opportunity is available.

School SLP Experiences with Stuttering: An Ohio Survey
1) One of the findings related to the education of SLPs was that:
   a. Adequate academic experiences in fluency
   b. Adequate clinical experiences
   c. At least two courses in fluency disorders
   d. Inadequate clinical and academic experiences in fluency

2) A high percentage of SLPs reported:
   a. A high interest in stuttering compared to other disorders
   b. A large caseload of children who stutter
   c. A lower interest in stuttering compared to other disorders
   d. Attending continuing education related to stuttering

3) SLPs were interested in:
   a. Taking additional grad coursework in stuttering
   b. Consulting with fluency specialists
   c. Attending continuing education programs
   d. Seeing increases in their workloads

4) The percentage of SLPs reporting that they wanted to become fluency specialists:
   a. Was high
   b. Was low
   c. Varied by age
   d. Varied by size of caseload

Assessing Fluent Speakers’ Beliefs about the Causes of Stuttering: Clinical Implications and Therapeutic Strategies
5) Developmental stuttering is widely recognized as being caused by:
   a. Overly anxious parents or caregivers.
   b. Learned behaviors from a parent who stutters.
   c. Internal and external factors.
   d. Genetics alone.

6) What is known about familiarity with people who stutter and one’s beliefs about the causes of stuttering:
   a. People who know someone who stutters are more educated about the causes of stuttering.
   b. Familiarity with someone who stutters does not seem to influence one’s understanding of the causes of stuttering.
   c. People who know someone who stutters are less educated about the causes of stuttering.
   d. None of the above

7) In this study, which type of statement was reported most often by participants?
   a. Stuttering is a learned behavior.
   b. Stuttering is caused by psychological issues.
   c. Stuttering is an organic (e.g., physical or neurological) disorder.
   d. Stuttering is genetic.
8) Which activities are helpful in addressing misconceptions about the causes of stuttering?
   a. Surveying fluent speakers for their impressions of stuttering
   b. Conducting in-services related to stuttering
   c. Disseminating information from the Stuttering Foundation
   d. All of the above

**Acquired Neurogenic Stuttering In a Case of Toxic Metabolic Encephalopathy**

9) Encephalopathy is a generalized term that refers to:
   a. Progressive loss of physical and mental ability
   b. Any diffuse disease of the brain that alters brain function or structure
   c. Constellation of symptoms including myoclonus, nystagmus, muscle atrophy and weakness
   d. Chronic periventricular white matter changes

10) Neurogenic stuttering typically appears:
    a. Following some sort of injury or disease to the peripheral nervous system
    b. Only during developmental years
    c. Following some sort of injury or disease to the central nervous system
    d. Following focal injury to the frontal lobe of the right hemisphere

11) The symptoms of neurogenic stuttering include all EXCEPT:
    a. Excessive levels of normal disfluencies or interruptions in the forward flow of speech, such as interjections and revisions
    b. Other types of disfluencies, such as repetitions of phrases, words, and parts of words (sounds or syllables, prolongations of sounds),
    c. Disfluencies only occurring at the beginnings of words
    d. Secondary or associated behaviors, such as obvious tension and struggle in speech production, movements of head or limbs while speaking

12) Treatment techniques that help reduce the symptoms of developmental stuttering may also be effective with neurogenic stuttering such as:
    a. Slowing the rate of speech
    b. Emphasizing a gentle onset of the start of each phrase
    c. Identifying the disruptions in the speech patterns and instructing the client in fluency shaping techniques
    d. All of the above

**Adolescents who Stutter and their Conversations with Friends and Family about Stuttering**

13) The methodology incorporated in this study was:
    a. Quantitative, survey-based design
    b. Qualitative in nature, using a phenomenological approach
    c. Mixed methods, combining survey-based data and qualitative interviews
    d. Quantitative in nature

14) How will the current findings impact how speech-language pathologists (SLPs) work with adolescents who stutter (AWS)?
    a. Assist in how SLPs work on disclosure strategies and better understand how AWS discuss their stuttering with others
    b. Affect how SLPs work on fluency shaping skills
    c. The current findings will not have any impact on clinical practice with AWS
    d. None of the above

15) In regard to siblings and friends, participants:
    a. Rarely discussed stuttering with friends, but discussed stuttering very frequently with siblings
    b. Discussed stuttering frequently with friends, but not very much with siblings
    c. Rarely discussed their stuttering directly with friends and siblings
    d. Discussed their stuttering very frequently with friends and siblings
16) From some of the participants’ perspective, how did friends find out that they stuttered?
   a. Some of the participants had an individual meeting with their friends to discuss their stuttering
   b. Some of the participants had a group meeting with friends and family members to discuss stuttering
   c. They would discuss their stuttering with friends at school
   d. Some of the participants believed their friends already knew they stuttered

**Stuttering Treatment: The Role of Acceptance in the Process of Change**

17) Conture and Culee (2007, 225-226) discussed which of the following concepts as important in treatment:
   a. Acceptance and openness as effective treatment goals for people who stutter
   b. Mandatory group therapy for people who stutter
   c. The inappropriate use of role playing to practice social interactions
   d. Clinician determined goals for each client

18) Lee Reeves wrote about which of following concepts about “Acceptance”:
   a. A person who stutters should be concerned about stuttering as a way of speaking.
   b. Significant change in treatment is probably not dependent upon acceptance or being comfortable with stuttering in communication.
   c. Acceptance is important and necessary to sustain success.
   d. The process of change is dependent upon intensive treatment.

19) The Social-Communication Model (Conture, et al, 2007) explains the complexity of stuttering. Which of the following statements best describes this model?
   a. Each person who stutters has unique patterns of disfluency.
   b. Most people who stutter share the same negative attitudes about communication.
   c. Internal self-regulation and reactivity to stuttering is a problem for all individuals who stutter.
   d. Emotional reactivity to fluctuating levels of fluency is not considered to be an important factor in changing behavior.

20) In clinical interactions, it is important for the clinician to not:
   a. Design treatment interactions that facilitate client based ideas and solutions to communication problems
   b. Develop activities/approaches for client self-discovery of communication behaviors/attitudes
   c. Explain that fluency enhancing/stuttering modification strategies will eliminate the stuttering
   d. Facilitate the acceptance of improved communication as the outcome of treatment.

21) Techniques to facilitate change as suggested by Prochaska, Norcross and DiClemente (2006) do not include:
   a. **Consciousness Raising:** Increased awareness of information about stuttering and potential treatment approaches.
   b. **Social Reviewing:** Analyzing previous, negative social interactions as a form of building self-esteem.
   c. **Self-Knowledge:** helping the client to learn about his/her problem
   d. **Self-re-evaluation** of behaviors though thoughtful and emotional re-evaluation of his/her problem resulting is self-appraisal and eventually problem solving.
   e. **Countering:** Substituting new, healthy behaviors for unhealthy one.
Treatment Outcomes for a Nine-Day Intensive Stuttering Therapy Program

22) The program described includes this amount of therapy (in hours):
   a. 40
   b. 60
   c. 75
   d. 90

23) The original ISCAA offered 75 hours of direct therapy in this amount of time (days):
   a. 9
   b. 15
   c. 10
   d. 12

24) A comparison of stuttering severity (using the SSI-4) indicates the 9-day program yielded the following treatment effect measured by Cohen’s “d”:
   a. Small
   b. Medium
   c. Large
   d. None

25) The primary limitation identified with this study is:
   a. Small sample size
   b. Reliability for clinical data
   c. Lack of qualitative data
   d. Client non-compliance

Recovery from Stuttering an Application of Pentadic Analysis to Narratives of People Who Stutter

26) The authors suggest that people who stutter may suffer from:
   a. Emotional and attitudinal consequences of their communication disorder
   b. Only issues in communication
   c. Other types of communication disorders
   d. Speech disfluency

27) The use of Pentadic Analysis was initially discussed by:
   a. Bruner
   b. Van Riper
   c. Burke
   d. Beck

28) The authors utilized narrative transcripts from:
   a. A famous symposium that included successful speakers who stutter
   b. Clients at a University clinic
   c. Teenagers who stutter
   d. A recent presentation by people who stutter

29) One of the major themes of recovery that arose from the narratives was:
   a. The success of past therapy
   b. The need to continue to hide stutter
   c. Struggles to meet the social expectations of fluency
   d. The importance of a “guru”
eHearsay, the electronic journal of the Ohio Speech-Language Hearing Association, is designed to address the professional development needs of the state association.


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- **Review**: A comprehensive overview of an area of speech, language, or hearing sciences and/or disorders (i.e., systematic review or meta-analysis). Reviews should be accessible to knowledgeable readers not expert in the subject area. They should be prepared with the same rigor as a research article reporting specific results. These are typically limited to 40 manuscript pages including citations, tables, and figures.

- **Tutorial**: Educational expositions covering recent literature on topics of interest to clinicians and other scholars. These are typically limited to 40 manuscript pages including citations, tables, and figures.

- **Research Forum**: The purpose of a research forum (RF) is to provide a concentrated focus on a special topic deemed to be of high interest to the readership. An RF contains a series of empirical studies centering on a key aspect of speech, language, hearing, or swallowing science and/or disorders. RFs may also comprise a set of scholarly papers presented at a scientific conference.
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