The Successful Stuttering Management Program: A Preliminary Report on Outcomes

Jim Tsiamtsiouris
Department of Communication Disorders, William Paterson University
Wayne, NJ

Kim Krieger
Department of Communication Disorders, Eastern Washington University
Spokane, WA

Abstract

The purpose of this study was to test the hypothesis that adults who stutter will exhibit significant improvements after attending a residential, 3-week intensive program that focuses on avoidance reduction and stuttering modification therapy. Preliminary analyses focused on four measures: (a) SSI-3, (b) speech rate, (c) S-24 Scale, and (d) OASES. Results indicated significant improvements on all of the measures.

Introduction

The Successful Stuttering Management Program, or SSMP, is a residential, intensive stuttering modification treatment program that has been offered every summer at Eastern Washington University for almost half a century. Many of the participants that seek therapy come from different parts of the globe. The program's longevity is a testament to its success on many different levels. However, in today's health care environment, some sort of empirical evidence for treatment effectiveness is required by consumers, insurance companies, third-party payers, and speech-language pathologists. Unequivocal multidimensional evidence demonstrating treatment effectiveness of the SSMP and many other intensive stuttering treatment programs remains relatively rare despite calls for the verification of outcomes (Blomgren, 2007; Blomgren, Roy, Callister, & Merrill, 2005; Conture, 1996; Cordes & Ingham, 1998; Ingham, 2003; Onslow, 2003; Yaruss, 2001). The aim of this preliminary report is to begin the process of documenting and reporting outcomes of the SSMP.

The SSMP began in the 1960s at Eastern Washington University under the direction of Dr. Dorvan Breitenfeldt. As a young professor, he began the SSMP because he wanted to provide an intensive environment for training undergraduate and graduate students in individual and group therapy. He felt that very few universities provided this type of hands-on training with clients who stutter (D. Breitenfeldt, personal communication, July 2008). The belief was that intensive training provided the student clinician with the opportunity to learn a tremendous amount of clinical skills in a short amount of time.

The clinical training component has become one of the SSMP's trademarks. Each client is usually assigned two student clinicians. In some cases, the clinicians are experienced speech-language pathologists who attend the SSMP in order to gain additional experience in the treatment of stuttering. In addition, therapy is supervised and administered by three ASHA

certified speech-language pathologists who have extensive knowledge in stuttering therapy. Therefore, the SSMP is composed of 8 clients, 16 clinicians, and 3 supervising clinicians in most years. This very favorable client to clinician/supervisor ratio provides a tremendous amount of support and guidance and becomes difficult to replicate in other settings.

Another obvious goal, as implied by the title, is to teach the client to successfully "manage" his or her stuttering instead of aiming for total fluency. This was born out of Dr. Breitenfeldt's belief that stuttering for most teens and adults is a chronic and lifelong challenge, and, rather than aiming for total fluency as the goal, the client should aim to live with the disorder by reducing both extrinsic and intrinsic aspects of the stuttering, rather than allowing it to cultivate disabling and handicapping conditions (D. Breitenfeld, personal communication, July 2008). Cooper (1993) and Quesal (2007) appear to convey similar thoughts—that "managed stuttering" may be a more reasonable goal than complete fluency. This is in direct contrast to some of the treatments based on behavioral principles that define success as the total elimination of stuttering, with little emphasis placed on addressing communicative avoidances and attitudes (Ryan, 2001).

All clients and visiting clinicians of the SSMP live in university housing and are issued meal and laundry cards. It is a very affordable way to live for the duration of treatment, which is 3 weeks. Further, the treatment fees for clients are relatively low due to the tuition requirements for clinicians and the use of university facilities. Living on campus has additional advantages. Eastern Washington University is nestled in a small rural town outside of Spokane. Distractions are limited, and clients spend the entire 3 weeks insulated from family and employment responsibilities. Some may argue that insulation from the distractions of family, friends, and employment does not bode well for the transfer and maintenance of therapeutic gains after clients return home. In an effort to maintain the gains from the SSMP, a comprehensive maintenance program and support system is created prior to clients returning to home life.

The SSMP is offered once annually, usually toward the end of June and beginning of July. Clients attend 4 hours of daily individual and group therapy, Monday through Saturday. The goal of individual sessions is to teach clients avoidance reduction and stuttering modification strategies, similar to those described by Sheehan (1970) and Van Riper (1973). In group sessions, clients meet with all the supervisors and clinicians in a classroom setting, and the objective is to practice the strategies in a larger setting. A detailed description of the SSMP procedures and therapy techniques can be found in a manual published by Breitenfeldt and Lorenz (1989). However, it should be noted that this manual describes a 24-day program, whereas the current program has been condensed into 21 days. A publishable version of the current manual reflecting this change is in process. In general, the current program is divided into two phases. Phase one lasts 10 days and targets (a) developing a better understanding of factors that contribute to stuttering severity, (b) elimination and/or reduction of escape and avoidance behaviors related to stuttering, and (c) identification of an individual's stuttering pattern. The remainder of the program is spent in phase two. The goals of the second phase are to (a) learn techniques to manage stuttering, (b) transfer these techniques into out-of-clinic speaking situations, (c) develop a maintenance program. Techniques to manage stuttering center on traditional stuttering modification skills such as pull-outs, cancellations, and voluntary stuttering. Prolongation of vowels and consonants is another skill that is learned toward the end of the 3-week program. This is a technique that teaches clients to initiate beginning sounds with reduced tension and more control. Both phases involve the completion of hundreds of different and difficult speaking assignments in and outside the clinic. In addition to the 4 hours of formal therapy, clients are given many therapeutic assignments to complete before and after the daily individual and group treatment sessions. One unorthodox activity is an outdoor ropes course that takes place on the first Saturday of the 3-week

program. Supervisors, clinicians, and clients participate in low and high elements with the purpose of building trust and increasing one's ability to approach uncomfortable situations.

The last few days of the 3-week program focus on educating the client about the importance of following a maintenance plan upon returning home. This entails a somewhat detailed schedule of activities, and these are completed upon leaving the SSMP and in the months that follow. In addition, each client has the opportunity to return for a 1-week refresher program the following summer at no additional treatment cost to the client. The refresher program is facilitated by two speech-language pathologists, but by this point the clients are encouraged to become their own clinician and make their own decisions regarding the focus of each day's activities, as opposed to the very structured 3-week program. Many of the activities focus on the improvement of overall communication skills. For example, in the past few years, by popular vote, the clients attended a Toastmasters meeting and participated in a scavenger hunt race through Spokane while focusing on certain communication skills. Each returning client is encouraged to make decisions about his/her own management and to contribute to the work peers are doing.

Preliminary Treatment Outcomes

Although participation in the current study is optional, all of the adult clients over the past few years have elected to join the study. In total, there are 18 clients (12 males and 6 females), and their ages range from 18 to 62 with a mean age of 30.9. All of the participants have a history of previous stuttering therapy. Data from these clients were collected immediately before and after the completion of the intensive program. Speech samples were audio- and videotaped while clients talked to familiar and unfamiliar listeners. The collection of 12- and 24-month follow-up data is ongoing. The battery of outcomes data is similar to the one advocated by Blomgren and colleagues (Blomgren, 2007; Blomgren et al., 2005) and Quesal (2007). Surface features of speech fluency as well as other important variables that are not as apparent as the overt manifestations of the disorder are included in the assessment battery.

Preliminary analyses focused on four measures: (a) frequency, duration, and physical concomitants of stuttering; (b) speech rate; (c) communication attitude; and (d) self-assessment of the clients' experience with stuttering. A number of paired t-tests were performed to investigate any significant differences between pretreatment and posttreament values.

For the first measure, the Stuttering Severity Instrument-3 (SSI-3; Riley, 1994) was used. This is a widely known and used assessment tool aimed at quantifying changes to the surface features of a client's speech fluency through frequency, duration, and physical concomitants of stuttering. The end result is a total score that translates to a severity rating of the surface features of stuttering. Even though clients of the SSMP do not aim for the total elimination of the surface features of stuttering, a goal of the avoidance reduction and stuttering modification approach is to stutter in a less severe fashion, thereby reducing overt levels of severity. The 18 participants had a mean total score of 28.7 (Mild = 4; Moderate = 8; Severe = 6) immediately before treatment, and this was significantly reduced to a mean total score of 16.1(Very Mild = 12; Mild = 5; Moderate = 1) immediately after treatment, $t(17) = 12.2312$, $p < .0001$.

A reasonable assumption is that a reduction in the overt and covert symptoms of stuttering will lead to an increased speech rate. In other words, overt and covert symptoms of stuttering have the potential to affect the rate of speech, as measured by syllables per minute. A high frequency or long duration of stuttering moments will slow the rate of speech. We also believe that individuals who choose their words carefully in an attempt to avoid stuttering have an increased likelihood of a slower speech rate. In line with this assumption, preliminary findings indicate that the group significantly increased their mean pretreatment speech rate from 136.8 (range = 72-242; S.D. = 49.4) syllables per minute to 152.2 (range = 94-245; S.D. =

43.3) syllables per minute at the end of the 3-week treatment program (t[17] = 4.2336, p < .0006). Andrews and Ingham (1971) found that normal speaking rates range from 162 to 230 syllables per minute. It should be noted that increasing or reducing speech rate, which is a hallmark of many fluency shaping programs, is not a focus of the SSMP. However, as a by-product of avoidance reduction and stuttering modification therapy, speech rate appeared to "normalize" for the participants.

In theory, a reduction in the frequency of stuttering, avoidance behaviors, and learning to stutter without tension and struggle should result in better communication attitudes. This is relative to someone who believes that stuttering interferes with communication in a significant way and cannot "manage" his or her stuttering. The S-24 scale (Andrews & Cutler, 1974; Erickson, 1969) is a measure of communication attitudes and has been used in previous treatment outcomes studies. Some of these studies show that an improvement in the S-24 score increases successful long-term treatment outcome and reduces the chances of relapse (Guitar, 1976; Andrews & Craig, 1988). Prior to treatment, the SSMP participants had a mean pretreatment score of 17.5 (range = 10-23; S.D. = 4.5), which signified negative communication attitudes. However, upon completion of the SSMP, the group mean dropped significantly to 9.6 (range = 3-18; S.D. = 4.6), which is the typical score for someone who does not stutter, thereby signifying "normalized" attitudes toward communication (t[17] = 5.6224, p < .0001).

The speaker's assessment of his or her stuttering experiences, the final measure, was also analyzed. An individual's affective, behavioral, and cognitive reactions to their stuttering, difficulties communicating in daily situations, and the negative impact of stuttering on overall participation in life are factors that any therapy program should include as part of the assessment battery. For the present study, these factors are measured using the Overall Assessment of the Speaker's Experience of Stuttering (OASES; Yaruss & Quesal, 2008), a comprehensive questionnaire (100 items) based on the framework of the World Health Organization's International Classification of Functioning, Disability, and Health (Yaruss & Quesal, 2004). According to Yaruss and Quesal (2008, p. 3), the OASES "provides clinicians with a comprehensive assessment of an individual's stuttering" and "can be used to evaluate maintenance of treatment gains over time and at long-term follow-up." The mean pretreatment total OASES score was 3.1 (range = 2.2-3.8; S.D. = 0.5), and this translated to a moderate-to-severe impact rating. After 3 weeks of treatment, the impact rating was reduced to mild-to-moderate, with a score of 2.1 (range = 1.5-2.9; S.D. = 0.4). This difference was significant (t[17] = 9.4680, p < .0001). Table 1 displays additional group information for each of the four sections.

Table 1. Means and Standard Deviations of OASES Subtests Immediately Before (Pre-therapy) and After (Post-therapy) the Treatment Program

Section	Pre-therapy Mean (SD)	Impact Rating	Post-therapy Mean (SD)	Impact Rating
1	3.1 (0.5)	Moderate/Severe	1.9 (0.5)	Mild/Moderate
2	3.2 (0.5)	Moderate/Severe	1.7 (0.4)	Mild/Moderate
3	3.2 (0.6)	Moderate/Severe	2.0 (0.6)	Mild/Moderate
4	2.9 (0.8)	Moderate	2.7 (0.8)	Moderate

The strength of treatment effectiveness lies in the long-term data collected from that specific treatment approach. Most stuttering treatment programs can achieve immediate changes to (dis)fluency, especially on the surface. However, maintenance of these gains is the most critical measure in any therapy outcome. For the present study, the collection of 12- and 24-month follow-up data is ongoing and incomplete at the time of this writing, and statistical analyses and interpretations of long-term outcomes will be reported in the near future. Thus

far, eight individuals out of eighteen who completed the long-term follow-up revealed that group means did not differ notably from the data obtained immediately posttreatment. Table 2 displays group averages. A visual analysis of the preliminary data indicates a positive outcome. Interestingly, speech rate continued to improve.

Table 2. Means and Standard Deviations of Outcomes Immediately Before (Pre-therapy), Immediately After (Post-therapy), and at 12-months Follow-up.

Outcome Measure	Pre-therapy	Post-therapy	12-Months After Therapy
SSI-3	28.7 (5.8)	16.1 (4.2)	18.2 (4.4)
Speech Rate	136.8 (49.4)	152.2 (43.3)	175.3 (40.2)
S-24	17.5 (4.5)	9.6 (4.6)	9.8 (2.5)
OASES	3.1 (0.5)	2.1 (0.4)	2.3 (0.4)

Conclusion

In conclusion, the goal of these preliminary data is intended to be an initial step toward documenting and disseminating outcomes of the SSMP, a program which uses avoidance reduction and stuttering modification principles. Initial analyses indicate that clients who participated in the SSMP experienced a significant reduction in stuttering severity, an improvement in speech rate, "normalization" of communication attitudes, and a decrease in their perception of the impact that stuttering has on their life. It should be noted that stuttering was not eliminated from any of the clients, and this is consistent with the underlying philosophy and goal of this particular treatment program. The stated goal of the SSMP is to reduce or eliminate secondary behaviors and to reduce the severity of stuttering by learning to use stuttering modification skills. Preliminary data are indicative that clients achieved the stated goal of the SSMP. The next step in this process is to complete the collection of long-term data and determine whether clients were able to maintain those gains.

References

Andrews, G., & Craig, A. (1988). Prediction of outcome after treatment for stuttering. *British Journal of Disorders of Psychiatry, 153,* 236-240.

Andrews, G., & Cutler, J. (1974). Stuttering therapy: The relation between changes in symptom level and attitudes. *Journal of Speech and Hearing Disorders, 34,* 312-319.

Andrews, G., & Ingham, R. (1971). Stuttering: Considerations in the evaluation of treatment. *British Journal of Communication Disorders, 6,* 129-138.

Blomgren, M. (2007). Stuttering treatment outcomes measurement: Assessing above and below the surface. *Perspectives on Fluency and Fluency Disorders, 17,* 19-23.

Blomgren, M., Roy, N., Callister, T., & Merrill, R. M. (2005). Intensive stuttering modification therapy: A multidimensional assessment of treatment outcomes. *Journal of Speech, Language, and Hearing Research, 48,* 509-523.

Breitenfeldt, D., & Lorenz, D. (1989). *Successful Stuttering Management Program for Adolescent and Adult Stutterers.* Cheney, WA: Eastern Washington University.

Cooper, E. B. (1993). Chronic perseverative stuttering syndrome: A harmful or helpful construct? *American Journal of Speech-Language Pathology, 2,* 11-15.

Conture, E. G. (1996). Treatment efficacy: Stuttering. *Journal of Speech and Hearing Research, 39*, S18-S26.

Cordes, A. K., & Ingham, R. J. (1998). Treatment efficacy for stuttering: A search for empirical

bases. San Diego, CA: Singular.

Erickson, R. L. (1969). Assessing communication attitudes among stutterers. *Journal of Speech and Hearing Research, 12,* 711-724.

Guitar, B. (1976). Pretreatment factors associated with the outcome of stuttering therapy. *Journal of Speech and Hearing Research, 19,* 590-600.

Ingham, J. C. (2003). Evidence-based treatment of stuttering: I. Definition and application. *Journal of Fluency Disorders, 28,* 197-207.

Quesal, R. (2007). Data-based assessment of adolescents and adults who stutter. In E. G. Conture & R. F. Curlee (Eds.), *Stuttering and related disorders of fluency* (pp. 39-52). New York, NY: Thieme.

Onslow, M. (2003). Evidence-based treatment of stuttering: IV. Empowerment through evidence-based treatment practices. *Journal of Fluency Disorders, 28*, 237-245.

Riley, G. (1994). Stuttering Severity Instrument for Children and Adults. Austin, TX: PRO-ED.

Ryan, B. (2001). *Programmed therapy for stuttering children and adults* (2nd ed.). Springfield, IL: Charles C. Thomas.

Sheehan, J. (1970). *Stuttering: Research and therapy.* New York, NY: Harper & Row.

Van Riper, C. (1973). *The treatment of stuttering.* Englewood Cliffs, NJ: Prentice-Hall.

Yaruss, J. S. (2001). Evaluating treatment outcomes for adults who stutter. *Journal of Communication Disorders, 34,* 163-182.

Yaruss, J. S., & Quesal, R. W. (2004a). Stuttering and the international classification of functioning, disability, and health: An update. *Journal of Communication Disorders, 37,* 35-52.

Yaruss, J. S., & Quesal, R. W. (2008). Overall assessment of the speaker's experience of

stuttering. Minneapolis, MN: Pearson.