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<u>Intensive Stuttering Therapy with Telepractice Follow-up: Evaluating</u> Effectiveness

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Abstract

The purpose of this case study is to evaluate the effectiveness of the Multifaceted Stuttering Therapy Program for Adults and Adolescents Who Stutter. This therapy utilized an eclectic approach to intensive therapy in conjunction with a 12-month follow-up via video telepractice. The results indicated that the client benefited from the program as indicated by reduction in percent stuttered syllables and stuttering severity.

Background

Intensive therapy models have generally been reported to be effective and provide clients with a positive therapy experience. 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 (Gabel, 2008). Many intensive programs report positive outcomes (Boberg & Kully, 1994, Kully et al., 2007; O'Brian et al., 2008). St. Louis and Westbrook (1987) reviewed stuttering textament outcome studies published in major journals and books from 1980 to 1987 that applied treatment to three or People Who Stutter (PWS) and included pre- and post-treatment measures: The results indicated that a mix of two therapy models, intensive and non-intensive maintenance programs might often be the most effective as opposed to one treatment model alone. They found that intensive therapy models appear to be highly effective in helping PWS achieve fluency early in the process, however, problems with relapse arise when PWS are dismissed immediately following an intensive program.

It is extremely important to study the benefits of a mixed therapy delivery model (intensive program combined with follow-up therapy sessions), primarily due to the lack of research exploring feasibility issues with follow-up after the intensive portion of therapy and tack of published treatment effectiveness studies documenting benefits from therapy in the field of stuttering. This paper presents treatment effectiveness data for a multifaceted stuttering therapy program that includes an intensive model and 12-month televaractic follow-up (non-intensive) model for the treatment of stuttering.

Methods

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The current study is a single case study and the participant is an adult male who stutters. The participant was an undergraduate student majoring in speech-language pathology. The participant displayed severe stuttering (SSI: 3 score = 40) before attending the intensive stuttering clinic.

attending the intensive stuttering

Therapy program. The therapy program comprised a combination on-site intensive therapy and non-intensive follow-up sessions via video telepractice. The intensive portion of the program lasted three weeks for a total of 75 hours of direct contact time with the client. Several areas were addressed during the 75 hours. I providing the client education about stuttering, 20, focusing on attitude change (cognitive restructuring), 3) modifying stuttering, and 4) increasing fluency. The follow-up program conducted via video telepractice lasted 12 months and focused on 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 as follows: 1) two therapy sessions a week for one hour each during the initial six months 2) and one therapy session a week for one hour for the next six months.

Outcome measures. Outcome data to measure treatment effectiveness were measured at the beginning and end of the intensive portion of therapy and all approximately 6 month intervals during the follow-up portion of the program. Measures of treatment outcomes included outcomes related to speech measures: % Syllables Stuttered (SS) during phone calls, reading, monologue, and conversation, outcomes related to stuttering severity: Stuttering Severity Instrument-3(SSI-3), and outcomes related to attitudes: Locus of Control of Behavior (LCB) scale (Cring, Franklin, & Andrews, 1984; the Erickson S-24 Scale of Communication Attitudes (Andrews & Cutler, 1974); and Overall Assessment of Speakers Experience of Stuttering (OASES, Yaruss & Quesal, 2008).

The outcome data gathered in this study was analyzed using quantitative procedures. Changes for the participant during therapy and the impact of the two phases (intensive and non-intensive) were identified.

Results

Outcomes Related to Speech Measures

Figure I(a, b, c, & d) summarizes the outcomes related to speech measures (%SS in a variety of contexts) and stuttering severity (SSI: 3). The data presented in Figures Ia, b, c, & d were collected before the start of intensive therapy, following the intensive therapy, 6-modules after follow-up or its elepractice, and 1-year at the conclusion of follow-up therapy it deats suggest a significant drop in %SS for all tasks (monologue, reading, conversation, and telephones) at the end of the intensive portion of therapy. Data gathered 6-months after the initiation of follow-up therapy via telepractice indicates a decline in %SS. Data gathered at the conclusion of follow-up therapy is initiation of sollow-up therapy is the telepractice indicates a decline in %SS. The same in %SS at the conclusion of follow-up therapy is lower than the %SS measured at the conclusion of the intensive phase of therapy.

These results indicate that the client made significant gains during each phase of the program (intensive and non-intensive follow-up) and

These results indicate that the client made significant gains during each phase of the program (intensive and non-intensive follow-up) and maintained gains made at the conclusion of therapy. These results suggest that the use of video-telepractice for follow-up is an effective means of decreasing %SS and maintaining these changes made during an intensive stuttering clinic.

Outcomes Related to Stuttering Severity

Outcomes related to stuttering severity were measured using the SSI: 3. The results are presented in Figure 2. The data gathered during each phase of therapy and at the conclusion of therapy indicate a trend similar to the data related to speech measures. A significant drop in the SSI: 3 core is observed immediately following the conclusion of intensive therapy. This trend is maintained at the 6-month follow-up interval. Data gathered at the conclusion of follow-up therapy indicates a slight increase in the SSI: 3 score; however, the score is lower than the score reported at the conclusion of the intensive portion of therapy. This indicates that the client made significant gains as a result of intensive stuttering therapy and these gains were improved and maintained during the course of- and at the end of follow-up.

Results

Outcomes Related to Attitudes

Outcomes related to attitudes are presented in Figures 3 and 4. The three primary outcome measures included are: LCB (Craig. Franklin, & Andrews, 1984; Figure 3) which assess the extent to which a client believes he can control his behavior and has show to predict long-term outcomes (Guitar, 2006) with lower score indicating decreased danger of relapse; the S-24 (Andrews & Cutler, 1974; Figure 3) which measures communication attitudes and a lower score indicates a positive change in attitudes and decreased likelihood of relapse; and the OASES (Yarus & Quesa). 2006; Figure 4 a & b) a comprehensive measure that considers the totality of stuttering within the ICF framework to be used in daily treatment and treatment outcomes research.

The results indicate a decrease in scores for all attitudinal measures (positive outcome) at the conclusion of the intensive phase

The results indicate a decrease in scores for all attitudinal measures (positive outcome) at the conclusion of the intensive phase of therapy. Data gathered-6-months following the initiation of follow-up therapy indicate a slight increase in scores on all measures. This is an interesting pattern and could be a result of the nature (telepractice) of the follow-up poraron offered.

The overall impact score on the OASES measured at this point was higher than the score reported at the beginning of therapy. This could indicate an increased awareness of the impact stuttering has on the participant's life; however, this assumption needs to be corroborated with the participant. Score for individual sections of the OASES (Figure 4 b), were found to be same or marginally lower for the Sections I, II, and III; and higher for Section IV. This increase in the impact rating on Section IV (2.92 at the beginning of therapy to 3.16 at 6-month follow-up) contributed to the overall increase in the OASES indicates itsme. It should be noted that Section IV of the OASES addresses issues related to the individuals "Quality Of Life." Thus, an increase in the score at the mid-term evaluation on this section of the OASES indicates that the client feels that stuttering is having a negative impact on his overall quality of IT. This is an important issue and remains open to interpretation, especially since all speech related measures (%SS and severity) were found to have decreased at the time of this evaluation. Gathering qualitative data could have helped interpret this difference better. Scores reported for each measure decreased at the conclusion of follow-up therapy and were found to be lower than scores reported prior to the start of therapy; however, higher than scores reported immediately following the conclusion of (follow-up therapy indoor) the LTP. Scores on the LCB were found to be significantly reduced at the end of follow-up therapy integral an increase in

This pattern could indicate that either intensive therapy is a more effective means to working on the attitudinal component of therapy and/or physical proximity and the ability to complete outdoor activities during therapy plays a positive role in maintenance of attitudinal changes. It should be noted that all follow-up therapy was via videoconferencing and there were no opportunities to complete extra clinical activities related to desensitization during the follow-up phase.

Figure 1 a. % Stuttered Syllables for Monologue.

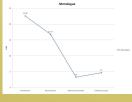


Figure 1 c. % Stuttered Syllables for Conversation

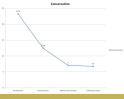


Figure 2. SSI: 3 scores.

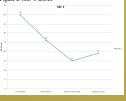


Figure 1 b. % Stuttered Syllables for Reading

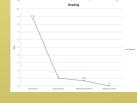


Figure 1 d. % Stuttered Syllables for Telephone.

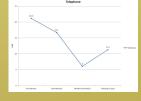


Figure 3. LCB and S-24 scores.

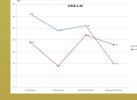
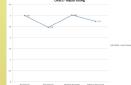


Figure 4 a. OASES overall impact ratings.





Discussion

The purpose of this study was to evaluate the effectiveness of using a traditional intensive approach to stuttering therapy coupled with a non-traditional, telepractice model of follow-up for a period of one-year. The results of this paradigm have been reported for one participant receiving these services.

Overall, the results indicate positive changes in measures relating stuttering severity and attitudes toward communication/suttering at the end of the intensive phase of therapy and maintenance of these gains at the conclusion of the one-year follow-up phase. Measures of stuttering severity and attitudes toward communication followed slightly different patterns (see Figures). The results indicate a drop in outcome measures related to stuttering severity (decreased severity) 6-months after initiation of follow-up therapy and a mild increase in stuttering severity at the conclusion of follow-up therapy. Outcome measures related to attitudes toward communication however, indicate a mild increase in all measures of the one-to-months following initiation of follow-up therapy, followed by a gradual decrease in all measures at the conclusion of therapy.

All measures related to stuttering severity and attitudes toward communication were found to be lower at the conclusion

All measures related to stuttering severity and attitudes toward communication were found to be lower at the conclusion of follow-therapy when compared to scores reported before the start of therapy, indicating that the participant made some significant gains during the course of therapy, and maintained these gains at the end. It is important however, to obtain follow-up measures 6-months, 1-year, and 2-years post therapy to assess the long-term effectiveness of this model of delivering therapy for people who stutter (PWS).

Limitations and Directions for Future Research

The primary limitation of this study is the lack of generalizability of results due to the nature of this study (a single case study). Another limitation of the current study is the lack of data evaluating long-term treatment outcomes (one to two years post therapy). This data will be collected and presented in a future study of this nature. Finally, reliability of the data gathered for speech measures was not completed. Future studies evaluating the effectiveness of stuttering therapy delivered via a model similar to this could possibly recruit more participants and use a multiple baseline design to better evaluate treatment effects for each phase of therapy in more detail. Finally, reliability of the data eathered for speech measures was not completed.

Future studies evaluating the effectiveness of stuttering therapy delivered via a model similar to this could possibly recruit more participants and use a multiple baseline design to better evaluate treatment effects for each phase of therapy in more detail

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