Evidence-Based Communication Assessment and Intervention

Intensive group therapy might be considered for older teenagers who stutter

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**Treatment**

Intensive group therapy might be considered for older teenagers who stutter

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**Q** Is an intensive group therapy program effective in reducing overt and covert stuttering behaviors of older teenagers who stutter?

**METHODS**

**Design:** A single-case experimental design with baseline, several therapy phases, and a final follow-up phase. The temporal arrangement corresponds to an ABC design with a follow-up phase.

**Allocation:** Each participant served as his own control and each received each of the phases.

**Study duration:** This study was conducted over a period of 52 weeks and in three phases. A five-week baseline phase (A) was followed by two weeks of intensive group therapy (B). This initial therapy phase was followed by a 5-week period of self-managed therapy or a consolidation phase (C). Finally, there were 10 follow-up probes over 40 weeks.

**Setting:** A tertiary center served as the setting. The setting included specialists in the treatment of stuttering.

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**Participants:** Five participants from a group of clients who had attended the tertiary care center in the past two years volunteered to participate in the study. The participant selection criteria included (a) a diagnosis of stuttering by a specialist speech-language pathologist, (b) a severity rating of “mild” or higher on the Stuttering Severity Instrument-3 (Riley, 1994), (c) an independent clinical recommendation for intensive group therapy, and (d) an age between 16 and 19 years. All participants were living at home, full-time students, and monolingual English speakers.

**Intervention:** The intensive group therapy (Phase B) consisted of three components. The first component was speech management skills and included speech modification and fluency shaping skills. Cognitive behavioral therapy (CBT) and treatment of social anxiety was the second component. The final component of therapy comprised communication skills. These skills tried to shift the focus from fluency to other aspects of communication, such as eye contact, listening, turn taking, self-reinforcement, and problem solving. Therapy was a collaborative effort among the participants who were urged to develop individual goals. The authors claim that the two specialist therapists facilitated the

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treatment. However, it is not clear if each of the specialist worked with one or all of the five participants. Treatment integrity data were not reported.

**Outcomes:** The effectiveness of the component of speech management was assessed by calculating a percentage of syllables stuttered (%SS) from the recordings provided by the participants under the two conditions of reading and conversation. From 25 to 33% of the number of recordings from each participant were analyzed to calculate intra-judge reliability. That reliability reported ranged from .957 to .99. The perceived effectiveness of the component of CBT was measured by administering four different surveys. The first survey used was the Self-Efficacy Scale for adolescents who stutter (SEA), which evaluates the amount of self-confidence in producing fluent speech in various daily living situations (Manning, 1994). Manning (2001) claimed that this scale is best used for assessing fluency performance outside of clinical situations and during follow up. The second survey used was the Fear of Negative Evaluations (FNE), which assesses presence of fear of negative evaluations by others (Watson & Friend, 1969). This survey is shown to be useful in measuring social approval and locus of control (Corcoran & Fisher, 2000). It is also used to measure the effects of CBT on social phobia (Cox, Swinson, & Direnfeld, 1998). The third survey used was the Wright and Ayre Stuttering Self-rating Profile (WASSP), which measures five aspects of stuttering (Wright & Ayre, 2000). The five aspects include a client’s perception of stuttering behaviors, avoidance, thoughts, feelings, and disadvantage. The fourth and final survey used was the Locus of Control of Behavior Scale (LCB), which is used to predict relapses (Craig, Franklin, & Andrews, 1984). The effectiveness of the third component of communication skills was not measured. The authors deemed the measure of the first component, the %SS, as that of the overt behavior of stuttering and the ratings from the four surveys as a measure of the covert behaviors of stuttering.

**Attrition:** Of the five participants originally recruited, two dropped out after the baseline phase. Only P1 continued through the entire year-long follow up and provided all the 40 (or 100%) of the planned recordings for analysis. Though P2 and P3 completed the first three phases, P2 provided 30 recordings (75%) and P3 provided only 20 recordings (50%).

**MAIN RESULTS**

All of the three participants showed a statistically significant response to treatment as measured by %SS. P1 maintained the treatment effect over the follow up period. According to the authors, there were not sufficient data to analyze longer-term treatment effect in P2 and P3.

Variable results in SEA, which measures self-confidence in daily living situations, were reported. P1’s mean SAE score approached those of fluent adolescents. This finding is in line with the decrease in his %SS. P2 initially showed some improvement, but then his score dropped, and he stopped providing data. His withdrawal from treatment coincides with
the increase in his %SS. P3 showed improvement during the treatment phase, but his score dropped and then varied during the maintenance phase.

Variable results were also reported from the FNE survey. P1 showed sustained reduction in his fear of negative evaluation, which is in line with his other outcome measures. The authors claim that P2 and P3 showed similar reduction.

The WASSP scores, which measure a client’s perception of stuttering, decreased in all the three participants during the course of the intensive group therapy. P1 showed the highest amount of decrease in his WASSP score. However, starting the last day of the intensive group therapy, the observed decrease in WASSP scores was either not sustained or varied in all three participants.

The final measure was LCB, which when low suggests internal control and when high suggests external control. During the baseline phase and the intensive group therapy phase, P1 and P2 showed a decrease in their LCB scores, while P3 showed an increase. The LCB scores of P1 rapidly increase after the treatment, P2 did not to provide additional data, and P3 returned to his original low score and maintained it through the follow up period.

**AUTHORS’ CONCLUSIONS**

The authors conclude that all participants showed a significant decrease in overt stuttering in the short term and that medium-term therapy effect occurred in all three participants. The authors also claim that those participants who stayed in contact for a longer period showed sustained reduction in stuttering and reported positive changes in overt behaviors via self-reports.

**COMMENTARY**

Reports of prevalence of stuttering have been between below 1% to above 2% across the world for over a century (Bloodstein, 1995; Craig, Hancock, Tran, Craig, & Peters, 2002; McKinnon, McLeod, & Reilly, 2007; Proctor, Yairi, Duff, & Zhang, 2008). Hence, identification and implementation of the best intervention approaches to help people who stutter, such as this study, remain critically important. The authors of this study chose the established protocols, such as speech modification, fluency shaping (Swartz, Irani, & Gabel, 2012), CBT (Menzies, O’Brien, Onslow, Packman, St Clare, & Block, 2008), and social skills training, and developed a treatment protocol incorporating them all. Such a protocol not only has potential to affect a change in the speech behavior but it also has an impact on personal and social aspects of stuttering. This broad approach is well thought and merits further investigation. From the design perspective, this study replicates another study by Fry, Botterill, and Pring (2009); however, it does not meaningfully move beyond the original study. There are several matters to be kept in mind while interpreting the results of this study; these results can only be used with much caution.

First, as the viability of the therapy paradigm was established in the study being replicated, as the authors claim, the next logical step would be to conduct a study using controlled cohorts with a follow-up. Such a study would have produced a higher level of evidence. The authors, in this case, reproduced evidence
at Level 4 of Levels of Medicine (OCEBM, 2011). It would have been better to replicate the therapy effect in controlled cohorts. Next, the original study included one participant. This study used three participants. However, two of the three participants in this study did not provide all of the data. Hence, long-term effects remained undetermined in these participants. With complete data from only one participant, the generality of the findings remains limited.

Second, and very importantly, the integrity of the therapy protocol (Kaderavek & Justice, 2010; Schlosser, 2002) is neither established nor clear. There are no data offered that reveal whether the treatment has been applied as intended. The lack of clarity of the therapy protocol permeates the therapy phase B as well as the consolidation phase C. With reference to the therapy phase B, the authors do not state the number of hours of contact during the two-week-long intensive group therapy. They do not provide any information on how the successful acquisition of speech management and communication skills by the participants was assessed and ensured. It is unclear if the cognitive behavioral therapy was provided by a speech-language pathologist or a psychologist licensed to practice CBT. The lack of treatment integrity data is a critical limitation of this study. Adding the information about the treatment fidelity would have allowed a practitioner to perhaps incorporate the outlined treatment protocol either in any replication or in practice (Schlosser, 2002).

Furthermore, the authors provided no report of intra-rater reliability for P1, for whom they claim they re-analyzed 25% of the recordings, and for P2, for whom they claim they analyzed 33% of the recordings. The authors also do not provide an indication of the amount of data examined for calculating the figures of interrater reliability. Given little information, a practitioner cannot determine how many hours of contact he or she should have with a client, how to ensure that the client has acquired the necessary speech management and communication skill, how to approach the delivery of CBT, and whether their assessments of a client will be valid and reliable. Finally, during the consolidation phase C, it is not possible to determine which activities the participants engaged in during the self-managed consolidation of skills. It is unclear how the skills were consolidated. The authors provide no information as to whether the participants practiced their skills in the presence of the specialists, among themselves, or in public. Nor do the authors provide any information as to how the consolidation of skills was verified. Thus, it is uncertain how the consolidation of skills took place. Further, there is no indication of the outcome of the consolidation phase. Without this essential information from phases B and C, it is not possible for a practitioner to apply the intensive group therapy protocol in service of the people who stutter. This negatively affects the generalizability of the therapy protocol.

Further, there are unanswered questions about the surveys used in the study that serve to indicate covert behaviors in the participants. It is unclear why the authors chose to use four surveys. It should be noted that the SEA and the WASSP measure very similar constructs of perception of self, while the LCB and the FNE measure the same construct of locus of control. The authors’ reasons for using two surveys for the same construct remain unclear. Additionally, it is uncertain why
the authors chose to use the longer FNE instead of the shorter but equally valid FNEB (Collins, Westra, Dozois, & Stewart, 2005). It should also be noted that neither the SEA nor the LCB are normed in the UK. Perhaps norms from the UK could have helped avoid any possible confounding in the interpretation of the data from these surveys. It is not appropriate to assume that cultural differences between the USA, where these surveys are normed, and the UK, where the surveys were used, do not play any role. In the absence of representative norms, data from these surveys do not reveal the participant’s reality in self-reports or provide a true picture of covert behaviors of the participants. The authors seem to waver in their decision to use the LCB. They clearly state that the evidence for use of LCB is ambiguous, but then they nonetheless use the LCB. The purpose of LCB is to predict relapse (Craig et al., 1984). The authors should have tried to make a connection between any changes in LCB scores with chances of relapse in P1 and P2 whose LCB scores remained high. Instead, the authors question the usefulness of LCB. Thus, there does not seem to be any important reason to use multiple measurements, especially those measures that duplicate one another. In any case, due to the lack of adequate amount of data, all of the purported measures of covert behaviors—the SEA, the FNE, the WASSP, and the LCB—became uninterpretable for two of the three participants. Lastly, though the authors used one or more measure to assess participants with respect to the first two components of the intensive group therapy, they did not report any measure of the third component of communication skills.

From a researcher’s perspective, the threat to internal validity in this study is a serious concern. Lack of adequate descriptions of the intensive therapy protocol hinders reasonable generalization of the protocol. Thus, this effort appears to be a lost opportunity. From the practitioner’s perspective, this study adds little to what is known and is already an accepted part of the evidence-based therapy to help people who stutter. Speech modification techniques help a majority of people who stutter (Swartz, Irani, & Gabel, 2012), and CBT does not affect fluency but does help people who stutter with any social fear (Menzies, O’Brian, Onslow, Packman, St Clare, & Block, 2008). Thus, this study does not affect the present treatment practices in any way.

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REFERENCES


