Articles Section

A PEER MEDIATED APPROACH TO INTENSIVE STUTTERING THERAPY FOR OLDER CHILDREN: RESULTS OF A PILOT STUDY

Rosalee C. Shenker, Ph.D., Jewish General Hospital & McGill University
Yvette Hus, M.Sc., Montreal Catholic School Commission
Alanna Rubin, M.Sc., Montreal Catholic School Commission
Bernice Mendelsohn, M.S.P.A., Jewish General Hospital

An intensive group program of fluency training for children from 8-14 years was attempted. The goals of the program included peer mediated practice as a way of facilitating and maintaining a high motivational level. The children were seen for a total of 40 hours over three weeks. In addition, parents participated in four evening sessions. Training was based upon three speech goals which included slow rate, breath-stream management, and easy speech initiation. Training included transfer activities and a three-month follow up session.

Gains made in therapy were maintained in 6 or 7 children at the three month follow up session. Suggestions for improvements to this type of program are discussed.

On a mis à l'essai un programme intensif d'entraînment pour le bégaiement auprès de groupes d'enfants âgés entre 8 et 14 ans. Le programme était basé en partie sur la pratique en groupes de pairs dans le but de faciliter et de maintenir un niveau élevé de motivation. Nous avons vu les enfants quarante (40) heures en tout pendant une periode de trois (3) semaines. De plus, les parents ont participé à quatre séances dispensées le soir. L'entraînement était basé sur trois facteurs: le débit lent, la modification du débit d'air et l'amorce des sons versus l'amorce de la parole. L'entraînement comprenait aussi des activités de transfert et une réévaluation trois mois après l'entraînement.

Lors de la séance de réévaluation, on a pu constater que les progrès réalisés par 6 ou 7 enfants avaient été maintenus. Nous discutons maintenant des façons possibles pour améliorer la formule mise à l'essai.

In recent years, the clinical literature has focused upon treatment of the young child or the chronic adult stutterer. However, the older child (age 7-14) who stutters often presents problems which suggest special treatment needs.

Although younger children appear to respond to programs based on behavior change techniques (Martin, 1972; Van Riper, 1973; Ryan, 1974; Azrin and Nunn, 1974; Shine, 1979), these types of programs are much less successful when employed in traditional treatment settings with older children (Rustin, 1977). One reason for this may be insufficient attention to the special needs of this age group. Van Riper (1973) described some of the difficulties in treating older children as "motivational", characterized by the children's unwillingness to come for therapy, inability to attend to the task or to understand and take responsibility for treatment. Furthermore, Rustin (1977) has argued that short treatment time (i.e., one half hour to one hour per week) leading to the prolongation of therapy may be partly responsible for "motivational" letdowns. Consequently, when rapid transfer and reinforcement of fluency outside the clinic is not achieved, discourage-

ment in the clinical process could lead to the types of problems that Van Riper has described.

Intensive therapy programs for adults have shown that dysfluency can be successfully modified over a short time, and follow-up studies have reported that the maintenance of that fluency is at least as good as some traditional long term approaches to the treatment of stuttering (Ingham and Andrews, 1972; Webster, 1973, 1974; Boberg, 1976). Although reports of programs which have treated children in short-term groups seem promising, doubts have been expressed about the ability of children under 14 to benefit from so short a program or to remain interested in such intensive therapy (Fawcus, 1970; Prins and Nichols, 1974; Rustin, 1977).

However, as stuttering in children aged 7-14 is still not fully developed, Van Riper (1973) argues that the individual behaviours may be less resistant to change, and chronic components such as avoidance, expectancy, struggle and tension still may be transitory. Furthermore, Rustin (1977) stated that the child's interaction with a group during intensive therapy for stuttering might increase or improve communicative and social skills, thereby increasing the probability for maintenance of fluency.

These statements suggest that intensive therapy for older children who stutter could avoid or successfully treat the types of "motivational" problems which seem to decrease the effectiveness of traditional treatments with this age group. With this in mind, an attempt was made to incorporate the components of intensive programs which facilitate fluency, with approaches designed to prevent the "motivational" problems often seen in the older child.

Rationale

This pilot program stressed three clinical objectives which were felt to be essential to the development of fluency in children. They were as follows:

1) Overlearning the fundamental skills of fluency
2) Intensive massed practice for carry over & maintenance
3) Family participation

A fourth objective, peer mediated practice, was added as a way of facilitating & maintaining a high motivational level. Each child has the responsibility of monitoring his own responses, plus the responses of one other child in the group. Feedback is generally verbal. In this way, the therapist takes the role of observer, while the children have more responsibility for the clinical monitoring of practice trials. It was hoped that this concept of the clinical relationship as a triad would increase the effectiveness of intensive practice and keep the children's level of motivation stable as they became the responsible agents for their own behaviour change.

Selection of the Children

Nine children; 8 boys and 1 girl, ranging from 8-14 years were selected. Eight of the children had had previous therapy. All were fluent speakers of English, although French and/or Italian was the language spoken at home in four cases. An additional criterion for

admission was parental willingness to participate in four evening sessions during the course of treatment.

Overview of the Program

Training was comprised of three, four day weeks, for a total of 40 hours.[1] Three months following treatment the children returned for an additional five hours of follow-up practice.

In addition, the parents participated in three group and one individual evening sessions.

A volunteer staff of four, which included two therapists from the Montreal Catholic School Commission, participated in this project on a full-time basis; each clinician was responsible for two children. Large group sessions were conducted by a graduate student trainee. The four permanent staff participated as needed on a rotating basis, thus permitting hospital routine to function without interruption. Table 1 is an overview of the training, which incorporated modifications of stuttering suggested by Curlee and Perkins (1969); Azrin and Nunn (1974) Webster (1974) and Boberg (1976), and which could be implemented with children. For example, Webster's program of Precision Fluency Shaping utilizes a series of five target behaviours through which fluent speech responses are shaped. A review of contemporary stuttering therapies suggested to the authors that Webster's five targets could be incorporated into three goals which are basic to achieving fluency, and in this way simplified for children. These were:

a) Rate of speech--defined as "slow. speech".

b) Breathing--defined as always having enough air for speaking.

c) Articulation--defined as easy, versus hard or forced speech initiation.

Based on these speech goals, the following program was developed.

Assessment

A pre-treatment video tape was made. Each child recited his name, address, phone number and age; read a 100 word passage, and spoke for 3 minutes or until á 100 word monologue could be secured. In addition, each child drew a Kinetic Family Drawing (Burns and Kaufman, 1970), in which all members of the family are represented in an activity (Figure 1). Finally, in order to evaluate stuttering awareness and self-perception, each child drew a picture of himself before, during, and after speaking (Figure 2) according to Bar and Jakab (1971) and Sheehan et al. (1962.)

1. This included 12 lunch hours during which the children practiced the program's goals in a social environment. At this time, coordinators of speech and motor activity, as well as the development of social skills were stressed, and as such, were counted as treatment hours.

Figure 1. Kinetic family drawing

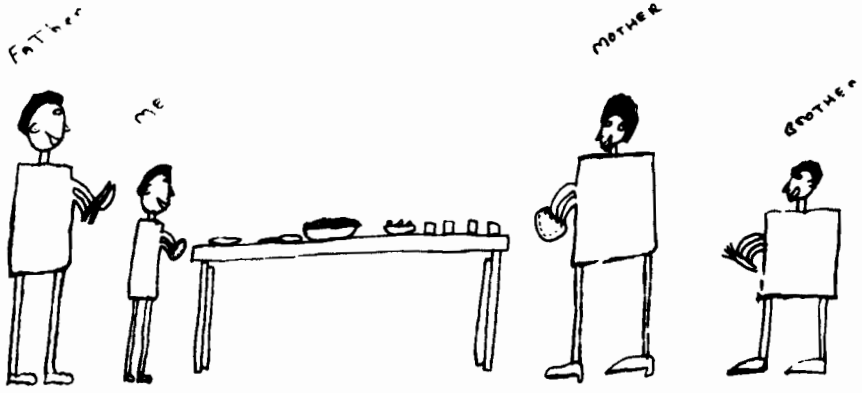
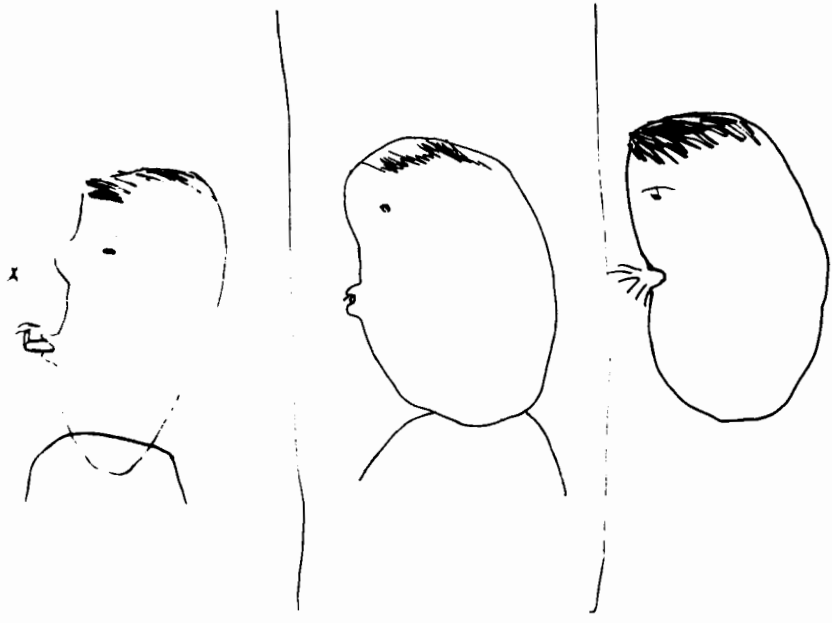


Figure 2. Before, during and after stuttering



Week One

On the first morning an informal and non stressful game session was arranged in order to introduce the children and staff. This was followed by a guitar led 'sing along'. During the afternoon session, identification of various ways of speaking fluently were demonstrated and discussed. The first goal of fluency, slow speech, was introduced and the children were instructed in the method of peer monitoring as follows. After the goals of the practice session are specified one child is chosen to practice while his 'peer' monitors his responses. For example, if the session goal is to say single words at a one second per syllable rate of speech, the monitor times the response with a stop watch, asking his peer to repeat the task if the criteria have not been met. The clinician acts as observer, intercepting only to clarify the conditions of the session. After ten minutes peer roles are reversed, and practice continues.

The children were divided into groups of two according to age. The format for the first week was as follows: four twenty minute practice sessions in the morning, separated by 10 minute breaks; and a group snack at midmorning.

In the afternoon, one 30 minute practice session was followed by a group meeting, during which the children participated in word games requiring a single word response. The second and third speech goals of breathing and easy speech were introduced on day three and four of the first week. The children were given materials and asked to practice three times a day for a minimum of 15 minutes and a maximum of 30 minutes total per day over the weekend. During this practice, the children were asked to choose a family member to time their speaking rate in the same way as their peer monitor had done. In the first parent group meeting, on day two, the nature of stuttering was discussed, questions were answered, the program was outlined, and the weekend assignment described.

Week Two

Eight children returned for the second week. The program was conducted in the same manner as Week one; however the speech goal was polysyllabic words and short phrases using the 3 fluency objectives. By the seventh day of training, the children were expected to use these objectives (breathing, slow speech and easy speech) at all times in the clinic. If a child stuttered, his peer was instructed to verbally or visually signal him in order to reinforce use of the goals. On day seven, the children were taken on their first 'outside' assignment; ordering ice cream using slow, easy speech. On day eight the second 'outside' session took place; ordering lunch at McDonalds. Weekend assignments included short phrases to practice in the same mode as discussed earlier. At the second parent meeting, on day seven, the fluency goals were discussed, demonstrated and the parents were asked to try simulating each objective while a therapist acted as their peer monitor.

Week Three

The final week was devoted to generalization. Practice sessions concentrated on connected speech and the children were encouraged to speed their rate up to 2 syllables per second, while maintaining fluency. For 'outside' sessions the children spent one hour each

morning in local shops asking prearranged questions. Each child was given a small amount of money which could be spent as he wished by using fluent, easy speech. In the clinic, practice sessions included phone call drill, role play of difficult speaking situations, and answering questions under time pressure. On days 11 and 12 a one minute extemporaneous and three minute prepared speech were presented to the group. A post-treatment video tape was secured on day 11. The third parent meeting included a discussion of maintenance of fluency at home, and ways in which the family could help in daily practice sessions. Each child received enough record keeping forms to last for three months, and was asked to practice a minimum of 15 minutes per day, with a family-member monitor and to keep progress records. Following the third week all parents were seen for individual sessions. At this time, each child's progress was discussed, video tapes were shown, and suggestions were made for transfer and maintenance of fluency to the home and school setting. At two months post-treatment, an additional package of practice materials was sent to each child with a letter encouraging families to phone if they needed help.

Three Month Post Treatment Follow-Up

Eight of the nine children returned for a two day follow-up in August, 1979. Reading and monologue tasks were re-assessed at this time and each child was seen individually to discuss progress or problems related to maintenance of fluency. In addition, the children were able to practice in small groups. One outside assignment was included.

Results

The individual scores for reading and speaking for pre- and post-treatment assessment and three month follow-up are presented in Table 2. In reading, stuttering decreased to a rate of at least 7% by the end of three weeks of treatment and was maintained at that level in all but one case (E.L.) after three months. In monologue, stuttering was decreased and maintained in all but one case.

While it was not expected that stuttering would be extinguished over a three week period, the results for this age group were encouraging. In addition to decreased dysfluencies per 100 word sample, video tapes made at three weeks show a decrease in the tension/struggle aspect of stuttering. The major stuttering behaviour counted was speech sound repetition. Secondary characteristics had disappeared in all but one case (E.L.). In this case, the tension/struggle aspect of stuttering seemed to have increased since the initial assessment. In addition, this child failed to improve in measurable aspects of speech during the three weeks. It should be noted that this child's family did not attend parent sessions nor did they respond to telephone attempts to make clinic contact through individual appointments.

It was also found that the number of words spoken during the monologue condition increased 30% from taping one to two. The children were generally more willing to speak, had less difficulty deciding upon a topic and went on past the time limit. Subjectively this indicates an ease with speech, and a more favorable attitude toward speaking than was noted at the onset of training.

It is felt that some of the factors which influenced the children's speech cannot be easily quantified. These variables are related

to the acquisition of new social skills, confidence and interest in speaking, and the challenge of competition inherrent in the peer-system. The results of individual parent interviews indicate that increases in the families' ability to understand and participate in the goals of the program contributed to the maintenance of fluency during the three month post-treatment interval.

Phone call follow-up at 6 months indicated that five of the eight children who completed the program were maintaining their fluency at levels acceptable to both them and their families. Of the three who had not maintained progress, one had not progressed through the program (E.L.); one was involved in a serious accident which necessitated hospitalization until December 1979 (S.B.) and one family claimed that personal problems had interfered with maintenance of fluency (D.B.). Of the five who had maintained fluency, two have returned to the clinic for follow-up treatment on a short term basis (S.G. and C.M.), and the one child who dropped out after one week returned for the last two weeks on a parent-child monitoring basis (D.D.).

Discussion

The results of this pilot program suggest that intensive short-term stuttering therapy can be as effective for older children as its' traditional counterpart. The factors which seem to be most predictive of success are identification with a peer-group, daily carry over, and parent intervention and participation.

As the current program served only as a pilot study, it is hoped that future programs of this nature might benefit from some of the criticisms and suggestions to be considered here.

In the future, programs for children aged 8-10 and 11-14 might be separate. These two age groups seemed to have distinctly different therapy needs. Whereas the older children were able to focus on long practice sessions in a productive manner, and seemed to enjoy the peer-mediated competitive spirit, the younger children were easily distractable, needed more frequent breaks, more structured linguistic tasks, and more therapist contact. Although the younger children in this study had no assessed language deficits, this may be an additional area to concentrate upon in training children who stutter.

Many suggestions for changes in the system of peer mediation must be mentioned. One criticism is the inability of the children to proceed at their own rate of progress. Although the pairs began equally, some children needed more time spent on a particular fluency goal or practice session. Alternative ways of facilitating this system could be grouping by stuttering severity or behaviours; or rotating groups weekly to keep up with daily progress.

Secondly, the therapists' observed that peer mediation became less effective outside of the structured practice session, and was difficult to maintain in 'outside' situations. This necessitated the active intervention of the therapist as monitor and weakened the reinforcing value of a crucial objective of the program, as the peer monitoring system is felt to be crucial in maintaining motivation during treatment. More attention to early monitoring by pre-training sessions in peer-monitoring might have resulted in earlier stabilization and generalization of this skill.

In addition, it has been suggested that an extra week be added for maintenance of fluency. Since parent participation seems to be a variable related to long-term progress, it would be advantageous for the parents to be in attendance in order to observe and be trained in ways to maintain fluency.

Finally, it seems that the effective carry-over of a program such as this must include communication with school personnel, and possible training maintenance of fluency in the classroom.

In summary, it must be stressed that short term therapy is recommended as a way of maintaining the motivational factors essential in the facilitation of fluency in older children and arriving at clinical fluency in the most efficient way. The maintenance of that fluency must be done through home practice and careful follow-up sessions. Since the intensive training in fluency skills for adults who stutter has now gained acceptance it is hoped that this program and others of an experimental nature will be instrumental in the development of a protocol for effective short-tern therapy, aimed at the prevention of chronic stuttering and/or the maintenance of fluency for the child and his family.

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TABLE 1

AN INTENSIVE PROGRAM OF STUTTERING THERAPY FOR CHILDREN: AN OVERVIEW

ASSESSMENT	TREATMENT			MAINTENANCE	FOLLOW-UP 3 MONTHS
	WEEK I	WEEK II	WEEK III		
1. Video Tape Reading Monologue 2. Stuttering Self-Perception	Introduction to Goals of Fluency a) slow speech b) easy speech c) breathing Peer-Mediated Practice: groups of 2-2-2-3 sounds single words Group Practice: word games Weekend assignment	Peer Mediated Practice: review week 1 polysyllabic words short phrases groups of 2-2-2-2 Group Practice: talking games always use fluent speech 2 outside speaking situations Record keeping at home	Peer Mediated Practice: sentences & connected speech Group Sessions: Phone calls roll play 1 minute extemporaneous speech 3 minute prepared speech Outside speaking situations: in groups of 4	Exercises Record keeping sheets Parent participation	2 days 3 hours each
	GROUP MEETINGS FOR PARENTS				

TABLE 2

PERCENT OF WORDS STUTTERED IN READING AND MONOLOGUE
FOR PRE-TREATMENT, POST-TREATMENT AND 3 MONTH FOLLOW-UP

		READING/100 WORDS			MONOLOGUE/100 WORDS		
CHILD	AGE	PRE	POST	FOLLOW-UP	PRE	POST	FOLLOW-UP
(1) S.M.	(12)	0	0	0	4	1	0
(2) C.M.	(13)	37	4	3	36	10	12
(3) E.L.	(11)	12	12	19	35	40	30
(4) P.Z.	(11)	13	7	7	27	17	17
(5) S.G.	(9)	19	5	1	25	11	14
(6) T.M.	(9)	6	0	0	11	6	2
(7) D.B.	(8)	13	5	0	23	3	4
*(8) S.B.	(12)	14	4	-	56	30	-
**(9) D.D.	(14)	4	-	-	9	-	-
Mean Percent Words Stuttered		14.3	4.5	4.3	27.1	14.6	11.2

* did not attend 3 mo. fu.
** only completed 1 week; data not included in study