CORRESPONDENCE THERAPY FOR STUTTERING

P. D. MANOHAR, M. JAYARAM, RANGASAYEE AND NARENDIRAN*

Introduction

Behaviour modification can be brought about directly by face to face contact or indirectly through correspondence. Correspondence therapy can be defined as the therapy/treatment carried out through postal correspondence. Correspondence therapy has a place in speech therapeutics where we can effectively use it with stuttering, misarticulation, education of the deaf, etc. Correspondence therapy can be carried out only with certain problems and situations where it does not require sophisticated equipment or skill on the part of the case.

The cases included in the correspondence therapy are usually those cases who are unable to go to the specialists/Institutions to receive advice and treatment for different reasons like distance, personal, social and economic problems and the non-availability of the specialists around their places. In any correspondence therapy first description of the case's problem is analysed by a specialist after which he will decide the course of therapy. Later the therapist sends instructions to be followed by the case and is asked to report the progress regularly so that he will get the feedback regarding the progress made by the case and the usefulness of the technique recommended.

The All India Institute of Speech and Hearing, Mysore 6 started the correspondence therapy programme on 27 March 1968 for stuttering problem. The need for starting this programme was felt when stutterers from different states in India and neighbouring foreign countries expressed through correspondence and by direct contact their inability to visit the institute for evaluation of their problem as well as to receive therapy for various reasons.

Methology

This study consists of the analysis of those cases who did not come to the institute but needed help (who will be referred to as group 'A' hereafter), and other cases who came to the institute for help but who could not stay to receive therapy (will be referred to as group 'B'). The cases registered in the correspondence therapy from the beginning till the 9 August 1973 are analysed here.

Case history forms were sent to persons in group 'A' to be filled and returned at their earliest convenience. After receiving them they were analysed regarding their Bio-data, family history of the problems, medical history and the description of their stuttering problem and then the suitable therapeutic technique for that

Mr P. D. Manohar, Lecturer, A.I.I.S.H. Mr M. Jayaram, Final M.Sc, A.I.I.S.H. Mr Rangasayee and Narendiran are First M.Sc. Students of A.I.I.S.H.

particular case was recommended. Shadowing or prolongation technique Was recommended for the obvious reason that they do not require any sophisticated equipment or extraordinary skill on the part of the case to follow the instructions. After sending the necessary instructions they were asked to send the weekly progress reports regularly.

The cases in the group 'B' after routine clinical evaluation and diagnosis were counselled and recommended either prolongation or shadowing whichever is suitable for that particular case. The results here are analysed based on the periodic report of the cases.

Results and Discussion

Table 1 shows the distribution of the cases in India and abroad isi the groups 'A', 'B' and both combined. Cases from 16 states in India and three foreign countries contacted the institute for help Maximum cases registered in correspondence therapy in group 'A' were from the state of West Bengal wh ich accounts for 41.67 per cent, and similarly the state of Karnataka in group 'B' which accounts for 84.66 per cent and on the whole Karnataka state accounts for 63.54 per cent followed by West Bengal (12.31 per cent). 38.65 per cent of the cases in group 'A' and 40.76 per cent of the cases in group 'B' and totally 40.15 per cent continued correspondence therapy. Totally 406 cases were assigned to groups 'A' and 'B'

TABLE NO. 1 Showing the distribution of cases in India and abroad in the groups 'A' and 'B'

Sl. No.	State	Group 'A'				Group 'B'				Groups 'A' and 'B'			
		Contd.	Disc.	Total	Perc.	Contd.	Disc.	Total	Perc.	Contd.	Disc.	Total	Perc.
1.	West Bengal	24	25	49	41.17		1	1	0.34	20	30	50	12.31
2.	Karnataka	8	7	15	12.62	92	151	243	84.66	98	160	258	63.54
3.	Kerala	4	4	8	6.72	7	4	11	3.83	10	9	19	4.67
4.	Bihar	3	3	6	5.04		1	1	0-34	3	4	7	1.72
5.	Maharastra	2	4	6	5.04	1		1	0.34	3	4	7	1.72
6.	Andhra Pradesh		5	5	4.20	3	2	5	1.74	3	7	10	2.46
7.	Uttar Pradesh	1	3	4	3.36					1	3	4	0.98
8.	Madhya Pradesh	3	1	4	3.36		1	1	0.34	3	2	5	1.23
9.	Assam	3	1	4	3.36					3	1	4	0.98
10.	Rajastan	1	3	4	3.36					1	3	4	0.98
11.	Tamil Nadu	2	2	4	3.36	14	7	21	7.31	15	10	25	6.15
12.	Delhi	1	1	2	1.68		2	2	0.69	1	3	4	0.98
13.	Gujarath		2	2	1.68						2	2	0.49
14.	Orissa	1		1	O.4					1		1	0.24
15.	Goa		1	1	0.84						i	1	0.24
16.	Punjab	1		1	0.84					1		1	0.24
17.	Nepal		2	2	1.68						?	2	0.48
18.	Bangla Desh	1		1	0.84					1		1	0.84
19.	Thailand						1	1	0.34		1	1	0.24
Total		55	64	119		117	170	287		163	243	406	
Percentage		46.21	53.79	29.31		40.76	59.23	70.68		40.21	59.85	100.00	

of which 119 belong to group 'A' and 287 belong to group 'B'. It was reported that 178 cases (43.84) had family history of stuttering.

It is very interesting to observe that the highest percentage (42 per cent) of persons who contacted the institute for help were from the state of West Bengal. It may be due to (1) lack of specialists available, (2) more publicity about the institute in that area or some unknown factor, whereas in group 'B' more cases were from the state of Karnataka (84.66). This is probably because the institute is situated in the state of Karnataka.

Tables 2, 3 and 4 show the distribution of cases with respect to sex, education, occupation and onset of stuttering in various age groups separately for

TABLE NO. 2 Showing the Distribution of Cases in Group 'A' According to Sex, Education, Occupation and onset of Stuttering in Various Age Groups

Age group in years	Sex				Education					Occupation			Onset of stuttering		
	M	F	Total	Perc	B.M.	M	G	PG	S	G/P	A	B	B-5 yrs	6-10 yrs	11-above
1-5	1	1	2	0.84	1	1			**1**				1		
6-10	1		1	0.84	1				**1**				1		
11-15	7		7	5.88	6	1			7				4	2	1
16-20	31	1	32	26.89	1	9	21	**1**	28	2		2	20		12
21-25	38	1	39	32.77		5	28	**6**	18	17		4	31	2	6
26-30	26		26	22.69	1	6	12	8	6	15	1	5	20	2	5
31-35	5		5	4.20		1	3	**1**		5			3		2
36-40	6		6	5.04	1		4	1		4		2	6		
41-45	1		1	0.84						1			1		
Total	116		119	100.00	11	23	68	17	61	44	1	13	87	6	26
Percentage	97.48	2.52			9.24	19.33	57.14	**14.19**	51.26	36.97	0.87	10.92	73.11	5.04	21.85

TABLE NO. 3 Showing the Distribution of Cases in Group 'B' According to Sex, Education, Occupation and onset of Stuttering in Various Age Groups

Age Group in years	Sex				Education					Occupation			Onset of Stuttering		
	M	F	Total	Perc	B.M.	M	G	PG	S	G/P	B	A	*D-5* yrs	**6-l 0** yrs	*11-* above
1-5	8	3	11	3.83	11				11				11		
6-10	43	8	51	17.77	51				51				31	20	
11-15	63	5	68	23.69	53	15			65		3		30	28	10
16-20	64	2	66	22.99	17	30	18	1	47	1	18		25	29	12
21-25	50	2	52	18.12	2	14	29	7	26	8	12	6	27	13	12
26-30	22		22	7.66	2	9	11		2	17	3		10	7	5
31-35	6		6	2.09		1	5			6			2	1	3
36-40	5		5	1.74		1	4			4	1		2	3	
41-45	2	1	3	1.04	1	1	1			2	1		2	1	
46-50	2		2	0.69		1		1		2				2	
51-55															
56-60	1		1	0.35			1			1			1		
Total	266	21	287		137	72	69	9	202	41	38	6	141	104	42
Percentage	92.68	7.31			47.73	25.08	24.04	3.13	70.38	14.28	13.24	2.09	49.12	36.23	14.63

TABLE No. 4 Showing the Distribution of Cases In the Groups 'A', 'B' and both Combined According to Sex, Education, Occupation and Onset of Stuttering

Group	Sex		Education				Occupation				Onset of Stuttering		
	M	F	B.M.	M	G	PG	S	G/P	A	B	*B-S* yrs	6-10 yrs	11 above
A	116	3	11	23	68	17	61	44	1	13	87	6	26
B	266	21	139	72	67	9	202	41	6	38	141	104	42
A& B	382	24	150	95	135	26	263	85	7	51	228	110-	68
Percentage	94.08	I5.91	36.94	23.39	33.25	6.40	64.77	20.93	1.72	12.56	56.15	27.09	16.74

the groups 'A', 'B' and both combined and out of the total cases registered in correspondence therapy, 382 (94.08) were males and 24 (5.93) were females. 82.35 per cent of the cases in group 'A' were in the age range of 16-30 years. Most of the cases (57.14) in group 'A' are from the graduation level and regarding the occupation 61 (51.66) were students, 44 cases held government or private jobs and 87 (73.11) of cases had reported their onset of stuttering below the age 5 years.

From the group 'B', 237 cases (82.57) were in the age range of 6-25 years. 137 (47.78) of the cases were from the below matriculation level. 202 (70.38) were once again students. 49.12 per cent (141) reported their history of onset of stuttering below the age of 5 years.

In both the groups the ratio of male and female stutterers contacted for help was 16:1. More number of cases in group 'B' in the younger age range contacted the institute for help in group 'A' . More cases from the graduation level contacted the institute for help in group 'A' whereas in group 'B' most of them were from below matriculation level. This may be because the parents of younger age level, because of the nearness of the institute contacted the institute for help in group 'B'. Students are more concerned with their problems in both the groups compared to any other occupation. The ratio of cases who reported their onset of stuttering problem below and above 5 years was 5:4.

Table 5 shows the distribution of cases in the groups 'A', 'B' and both combined who continued or discontinued therapy with respect to their education and occupation. From this we can see that the highest number of cases (51.47) who continued correspondence therapy were graduates in group 'A' and in group 'B' (58.83) and in both the groups the highest percentage of cases who discontinued were post graduates. With respect to occupation the highest percentage who continued correspondence therapy were students in group 'A' and in group 'B' employers in government or private firms.

Table 6 shows the distribution of the cases who followed shadowing and prolongation techniques with respect to duration. Among those cases who were recommended shadowing 50 per cent of them did not follow the instructions after 10 weeks.

TABLE NO. 5 Showing the Distribution of Cases in the Groups 'A', 'B' and both Combined who Continued and Discontinued Correspondence Therapy according to their Education and Occupation

Group	Cont Vs Disc.	Education								Occupation							
		B.M	%	M	%	G	%	PG	%	S	%	G/P	%	B	%	A	%
A	Contd	5	45.45	10	43.47	35	51.47	5	29.41	31	50.81	19	43.18	4	30.76	1	100.00
	Disc.	6	54.54	13	56.52	33	48.52	12	70.58	30	49.18	25	56.81	9	69.23		
	Total	11	9.24	22	19.32	68	57.14	17	14.28	61	51.26	44	36.97	13	10.92	1	0.84
B	Contd	45	32.37	42	58.33	28	41.79	2	22.22	82	40.59	18	43.90	13	34.21	4	66.66
	Disc.	94	67.62	30	41.66	39	58.20	7	78.77	120	59.40	23	56.09	25	65.78	2	33.33
	Total	139	48.42	72	25.08	67	23.34	9	3.13	202	70.38	41	14.28	38	13.24	6	2.09
A & B	Contd	50	33.33	52	54.73	63	46.66	7	26.92	113	42.96	37	43.52	17	33.33	5	71.42
	Disc.	100	66.66	43	45.26	72	53.33	19	73.17	150	57.03	48	56.47	34	66.66	2	28.57
	Total	150	36.94	95	23.39	135	33.25	26	6.40	263	64.77	85	20.93	51	12.56	7	1.72

TABLE NO. 6 Showing the Distribution of the Cases who Followed Shadowing and Prolongation Techniques with Respect to Duration

Duration followed in weeks	Shadowing	Per cent	Prolongation	Per cent
1-5	126	100.00	46	100.00
6-10	85	67.46	33	71.73
11-15	61	48.41	26	56.52
16-20	42	33.18	13	28.26
21-25	27	21.33	8	17.39
26-30	23	18.17	7	15.24
31-35	21	16.59	6	13.05
36-40	19	15.01	5	10.85
41-45				
46-50	15	11.85	4	8.68
51-55	10	7.90		
56-60	9	**7.11**		
61-65				
66-70	7	5.53	3	**6.51**
71-75				
76-80	6	**4.74**	2	**4.34**
81-85	5	3.95		
86-95				
96-100	4	3.16		
101-105	2	1.58	1	2.17
106-140				
141-145	1	0.79		

Table 6A and 6B shows the progress reported by the cases with shadowing and prolongation techniques in both the groups 'A' and 'B'. After 30 weeks of

TABLE NO. 6A Showing the Progress with Shadowing and Prolongation Techniques followed in Group 'A' with Respect to Duration

Duration followed **in** weeks	**Shadowing**					**Prolongation**			
	N/%	**I/%**	NC/%	W/%	**T/%**	N/%	**I/%**	NC/%	**T/%**
1-5		**6/11.76**	11/21.56	1/1.86	51/100.00	1/25.00	1/25.00	1/25.00	**4/100.00**
6-10		**2/6.06**	**3/9.09**		33/64.70				
11-15		**5/17.85**	**5/17.85**		28/54.90			1/50.00	2/50.00
16-20		**4/22.22**	**1/5.55**		18/35.29			1/50.00	
21-25		**3/23.07**	**1/7.69**		13/28.49				
26-30		**1/11.11**			9/17.64				
31-35									
36-40		**1/12.50**	**1/12.50**		8/15.68				
46-50	1/50.00		**2/33.33**		6/11.76		**1/50.00**		**1/25.00**
56-60									
61-65									
66-70			1/100.00		**3/5.81**				
71-95									
96-100	1/10.00				2/3.92				
101-105		1/100.0Q			**1/1.96**				
Total	2/3.64	23/41.82	25/45.45	1/1.81			**2/03.64**	2/3.64	

TABLE NO. 6B Showing the Progress with Shadowing and Prolongation Techniques followed in Group 'B' with Respect to Duration

Duration followed in weeks	Shadowing				Prolongation			
	N/%	I/%	NC/%	T/%	N/%	I/%	NC/%	Total/%
1-5		14/18.66	9/12.00	75/100.00		6/14.28	5/11.90	42/100.00
6-10		14/26.92	5/9.61	52/69.33		3/9 67	4/12.90	31/73.80
11-15		7/21.21	2/6.06	33/44.00		10/76.92	3/12.50	24/57.10
16-20		8/33.33	2/8.33	24/32.00		4/36.36		11/26.19
21-25							1/100.00	7/16.66
26-30		1/7.14		14/18.66	1/16.66			6/14.28
31-35	1/7.69	1/7.69	1/7.69	13/17,33		1/20.00		5/11.90
36-40		1/9.09		11/14.66	1/25.00			4/8.52
41-45								
46-50		2/22.22		9/12.00				
51-55		1/14.28		7/9.33				
56-60		2/33.33		6/8.00				
61-6								
66-70					1/33.33			3/7.14
71-75								
76-80		1/25.00		4/4.33			1/25.00	2/4.76
81-85		1/33.33		3/4.00				
86-100			1/50.00	2/2.26				
101-105						1/100.00		1/12.38
106-140								
141-145			1/100.00	1/1.33				
Total	3/4.00	52/69.33	20/26.66		3/7.14	25/59.54	14/33.33	

treatment with shadowing, 44 per cent showed improvement in group 'A' and in group 'B' 59 per cent. Similarly after 30 weeks of treatment with both the techniques in group 'B' almost similar improvement was noticed, that is, 59 and 57 per cent respectively.

Table 7 shows the distribution of the cases reporting progress in various age groups in the groups 'A', 'B' and both combined. Maximum improvement was reported in the age range of 16-30 years in group 'A' and in group 'B' 5-25 years and the same when both the groups are combined. The percentage of improvement reported in group 'A' was 49.09 per cent and 70.94 per cent in group 'B' and when both combined 63.37 per cent. These percentages include the cases who achieved normal speech also.

People in group 'B' showed greater improvement to group 'A'. The explanation could be due to the fact that in group 'B' the cases have been counselled face to face and were demonstrated as how to carry out the techniques.

Table 8 shows the distribution of cases who continued both the techniques in both the groups. In both the groups, persons who were assigned prolongation

TABLE NO. 7 Showing the Distribution of cases Reported Progress in Various Age Groups in the Groups 'A', 'B' and both Combined

Age Group	Group 'A' Progress reported N	I	NC	W	T	%	Group 'B' Progress reported N	I	NC	W	T	%	Group 'A' and 'B' N	I	NC	W	T	%
1-5								4	2		6	5.12		4	2		6	3.48
6-10		1			1	1.81		10	6		16	13.67		11	6		17	9.88
11-15		2	2		4	7.27	2	19	7		28	23.93	2	21	9		32	18.60
16-20	1	9	9		19	34.54	3	20	8		31	26.49	4	29	17		50	29.06
21-25		8	10		18	32.72	1	17	6		24	20.51	1	25	16		42	24.41
26-30	1	5	2	1	9	16.36		4	3		7	5.98	1	9	5	1	16	9.30
31-35			1		1	1.81		1			1	0.85		1	1		2	1.16
36-40			2		2	3.63		1	1		2	1.70		1	3		4	2.32
41-45			1		1	1.81			1		1	0.85			2,		2	1.16
46-50								1			1	0.85		1			1	0.58
Total	2	25	27	1	55		6	77	34		117		8	102	61	1	172	
Per-centage		45. 45			1.81			65.81						59.30			0.18	
	3.63		49.09				5.12		29.i05				4.65		35.46			

TABLE NO. 8 Showing the Distribution of cases who Continued and Discontinued Shadowing and Prolongation Techniques in both the Groups

Group	Shadowing Assigned	%	Contd	%	Disc	%	Prolongation Assigned	%	Contd	%	Disc	%
A	112	94.11	51	45.53	61	54.46	7	5.88	4	57.14	3	42.85
B	212	73.86	75	35.37	137	64.62	75	26.13	42	56.00	33	44.00
Total	324	79.80	126	38.88	198	61.11	82	20.19	46	56.09	36	43.90

continued in large number (56.09) compared to other technique. And also, when we compare between the groups more cases followed shadowing in group 'A' (45.54) than group 'B' (35.37) whereas with prolongation there is no difference in both the groups. (57 and 56 per cent respectively). People who were assigned with prolongation technique continued in more number in both the groups compared to shadowing. A probable reason could be that the prolongation technique does not require any external help as in shadowing and also it may be easier.

Table 9 shows the progress reported by the cases in both the groups with both the techniques. Group 'B' cases have shown greater improvement than group 'A' with both the techniques. The highest percentage of cases who reported no change with both the techniques were from group 'A'. With each technique, in both the groups the percentage of improvement reported was similar (64 and 65, shadowing and prolongation respectively). On the whole, in both the groups with both the techniques 63.95 per cent of the cases have reported improvement. Cases in both the groups reported greater improvement with prolongation technique than shadowing.

TABLE NO. 9 Showing the cases Continued Shadowing and Prolongation Techniques in both the Groups

		Normal		Improved		No Change		Worse			
Technique	**Group**	**Total**	%	Total	%	Total	%	**Total**	%	Total	**Percentage**
Shadowing	A	**2**	3.92	23	45.09	25	49.01	1	**1.96**	51	45.53
	B	**3**	4.00	52	69.33	20	26.66			75	35.37
	Total	**5**	3.96	75	59.54	45	35.71	1	0.79	126	38.88
	Percentage	**3.97**		59.52		35.71		0.79			
Prolongation	A			2	50.00	2	50.00			4	57.14
	B	**3**	7.14	25	59.52	14	33.33			42	56.00
	Total	3	6.52	27	58.69	16	34.78			46	56.09
	Percentage	6.52		58.69		34.78					
Grand Total		8		**102**		61		1		172	42.36
Percentage		4.65		59..30		*35*.47		**0.58**		42.36	100.00

Table 10 shows the progress reported in the group 'B' with respect to severity of stuttering, with both the techniques. From this, it can be seen that the shadowing is more effective with mild and moderate category of stutterers than prolongation whereas prolongation is more effective with severe category stutterers than shadowing.

Conclusions

1. 49.09 per cent of the cases in group 'A' have improved.
2. 70.94 per cent of the cases in group 'B' have improved.
3. 63.95 per cent of the cases registered in correspondence therapy have improved.
4. Face to face counselling and demonstration of the technique yields higher results with stutterers.
5. Higher number of cases followed prolongation technique compared to shadowing.
6. Prolongation technique yielded greater results compared to shadowing.
7. Prolongation technique is more effective with severe category stutterers whereas shadowing is more effective with mild and moderate category stutterers.
8. The ratio of cases who continued and discontinued correspondence therapy is 2:3.
9. Educational level of the cases is a variable in contacting for the help, following the instructions and continuing the therapy.

Recommendations

1. Follow up of the cases, continued and discontinued to know the present status of their problem is necessary.
2. Public education should be intensified in all the states so that they can correspond with the institute for help.
3. Other existing Speech and Hearing centers may also start correspondence therapy for the stutterers.

TABLE No. 10 Showing the Progress of the cases in the Group 'B' According to the Severity in both the Techniques

	Shadowing					Prolongation				
Severity	N/%	I/%	NC/%	W/%	T/%	N/%	I/%	NC/%	T/%	GT/%
Mild	2/7.14	22/78.57	4/14.28		28/37.33		8/61.53	5/38.46	13/30.95	41/35.04
Moderate	1/2.43	28/68.29	12/29.26		41/54.66	3/12.50	11/45.83	10/41.66	24/57.14	65/55.55
Severe		3/50.00	3/50.00		6/8.00		5/100.00		5/11.90	11/9.40
Total	3/4.00	53/70.66	19/25.33		75/64.10	3/7.14	24/57.14	15/35.71	42/35.89	117/100.00

Limitations

1. The results obtained are based only upon the report of the cases and the validity of the cases' report are not known.

2. Only shadowing and prolongation techniques were used because of the various reasons cited above.

Acknowledgments

The authors are grateful to the Director, All India Institute of Speech and Hearing, Mysore-6, for giving permission to use the Institute case records for this study. The services rendered by Mr Gururaj, Mr Prakash, Mr Vijayaraghavan, Mr Babu T. Kurien, Mr Ramananda, Mr V. S. N. Rao, Mr M. Kumar are also highly appreciated. All those who helped in carrying out this study are hereby acknowledged.